



**Date:** May 12, 2023

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USAID/Bureau for Humanitarian Assistance (BHA)

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**Subject:** Statement of Difference on the Final Evaluation for SHOUHARDO III

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Dear Ms. Lai,

Thank you for sharing the final round of revisions made to the “SHOUHARDO III Endline Evaluation of BHA Resilience Food Security Activity in Bangladesh” implemented by CARE International. Based on our review, CARE remains concerned about the quasi-experimental research design for the impact evaluation, included as part of the final evaluation report, and for not clearly stating its limitations in the document’s abstract and executive summary.

CARE asserts that the impact results of this evaluation are neither verifiable nor replicable. This is due to the use of a **counterfactual that is not comparable to the intervention group**. The evaluators chose sample households for the counterfactual from communities that were rejected by SHOUHARDO III because they were not the most poverty-stricken and vulnerable communities in targeted wards. The program targeted the poorest and most vulnerable households in the most disadvantaged, under-served and vulnerable communities. While comparison households were matched according to a 2014 estimated level of stunting among children under five, it is entirely possible that these households benefited from a better enabling environment within the community and environs in which they lived. Households selected for participation in SHOUHARDO III, however, were not only poor, but they lived in highly destitute communities with few opportunities or services. For this reason, we assert that the impact evaluation results are **biased towards not finding an impact where impact occurred, because the two groups are not comparable and none of the analytical approaches leveraged are able to adequately correct for this bias**.

Should the impact evaluation data remain in the report, we request that the disclaimer about the limitations of the impact evaluation - stated on the bottom of page 44 - be repeated in the document’s abstract and executive summary.

In addition, the evaluator’s recommendation that the program pay “small honoraria” for Local Service Providers (esp. vaccinators and PCSBAs) and/or finance motorcycles for

transportation – page 154 - remains in direct contradiction to the program’s sustainability approach which CARE carefully designed with USAID.

Sincerely,

A handwritten signature in black ink, appearing to read 'Juan Echanove', with a small horizontal line at the end.

Juan Echanove  
Associate Vice President, Food and Water Systems  
CARE/USA



**USAID**  
FROM THE AMERICAN PEOPLE



[PHOTO CREDIT: PROFESSOR MOHAMMAD A. RAHIM.]

# SHOUHARDO III

## PERFORMANCE AND IMPACT EVALUATION

Endline Evaluation of Bureau for Humanitarian Assistance Resilience Food Security Activity in Bangladesh, Implemented by CARE International

### Volume I - Report

October 2023

**DISCLAIMER** This publication was produced for review by the United States Agency for International Development's Global Development Lab. It was prepared independently by the University of Notre Dame's Pulte Institute for Global Development, Aiddata, and Mathematica, part of the ERIE project under contract AID-OAA-A-16-00025. The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development.



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Photo credit: Professor Mohammad A. Rahim. Tanguar Haor

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We'd like to thank the SHOUHARDO III implementation team for providing insightful knowledge into their program and its implementation, as well as their local implementing partners for their guidance and insights. We'd also like to acknowledge the ICF International team, whose baseline evaluation and report were critical in providing baseline information for this report.

The qualitative team would like to thank our data collection partner, Data Management Aid (DMA), led very capably by Maqbul Bhuiyan; Shereen Khan, who led the qualitative data collection; and Shuchita Rahman, who led the data coding. In addition, we would like to thank their teams for their hard work and dedication to this study. We would also like to thank Drs. Mohammad A. Rahim, Wakilur Rahman, and Mahfuzur Rahman, experts in the fields of agriculture, livelihoods, and nutrition, for accompanying our team, collecting observational data, and sharing their analysis and insights. Finally, we would like to thank all the respondents and community members who shared their time, expertise and reflections with us. The quantitative team would also like to thank DMA and Maqbul Bhuiyan. We appreciate all the hard work he and his team put into collecting very high quality data. We would like to thank the quantitative independent consultants, Touhidul Islam, Shilpi Barmon, and Arif Hasan, for their hard work in the field ensuring data accuracy. Lastly, we would like to thank all the respondents for their willingness to share their time and personal perspectives.

The Pulte Institute for Global Development at the Keough School for Global Affairs at the University of Notre Dame, in partnership with AidData and Mathematica, prepared this publication. The United States Agency for International Development reviewed all material.

## ABSTRACT

This report evaluates the performance of the **SHOUHARDO III** project, which targets poor households in the *char* and *haor* (wetland) areas of Bangladesh and aims to address food and income insecurity, maternal and child health and nutrition, women's and youth empowerment, as well as improve access to public services while building resilience capacities. This evaluation employs three methodologies: qualitative inquiry, pre-post comparison, and impact evaluation. The impact evaluation matches communities treated by SHOUHARDO III with untreated communities ex-post, using baseline stunting rates from the 2014 DHS dataset.

The evaluation finds that the SHOUHARDO III project engaged more than 40% of households surveyed within target villages and successfully targeted poor and female-headed households. The analysis of baseline and endline statuses (pre-post analysis) of households in the SHOUHARDO III-targeted areas demonstrates that households from these areas improved across several indicators, including poverty levels, the nutritional status of women and children, women's empowerment, and gender equity. From a qualitative standpoint, participants from areas where SHOUHARDO III appeared well-implemented offers insights into the potential of the interventions. The qualitative evaluation found mechanisms of change in several areas that can be built upon and enhanced. Qualitative findings show that the program succeeded in promoting multi-sectoral change at household and community levels. They also show that SHOUHARDO III effectively targeted services to the most food-insecure, Poor and Extremely Poor members of communities, and its multi-generational and gender-inclusive approach to its interventions facilitated community acceptance.

From the impact evaluation, it is likely that we can credit SHOUHARDO III with improvements in women's dietary diversity, women and children's minimum acceptable diet, antenatal care access, and the increase in participation across several sectors. In addition, households in SHOUHARDO III villages experienced statistically significant differences in one resilience indicator, and households in program villages that experienced major shocks were better able to maintain their food consumption than similar households in comparison villages.

However, the impact evaluation does not find meaningful differences between households in targeted communities and households in non-targeted communities in terms of women's mobility and decision-making, children's nutritional status (including child stunting and underweight status), children's diarrhea, exclusive breastfeeding, household hunger, and improved use of health and nutrition services overall. Improvements in most measured conditions in the SHOUHARDO III program areas appear to have been matched by similar improvements in non-program areas, suggesting broader forces may account for them.

Ultimately understanding differences between program areas and non-program areas can help inform decisions about future chapters of the SHOUHARDO III program and other development food security programs to ensure the most effective programs for vulnerable populations. Understanding the dynamics and mechanisms of change and responses of participants to interventions can also inform future work. Salient findings are also important to highlight for action. The research team concludes this report with recommendations.

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## ACRONYMS

|   |   |
|---|---|
| ANC – Antenatal care  | MAD – Minimum acceptable diet   |
| BHA – Bureau for Humanitarian Assistance                      | MCHN – Maternal and child health and nutrition  |
| BMI – Body mass index   | MDD – Minimum dietary diversity   |
| BMRC – Bangladesh Medical Research Council                    | MFI – Microfinance institution  |
| CARE – Cooperative for Assistance and Relief Everywhere       | MOH&FW – Ministry of Health and Family Welfare  |
| CHN – Child health and nutrition                              | NBD – Nation-building Department  |
| CPR – Contraceptive prevalence rate                           | NGO – Nongovernmental organization  |
| DHS – Demographic Health Survey                               | NRM – Natural resource management   |
| DMA – Data Management Aid                                     | ODF – Open defecation free  |
| EA – Enumeration area   | ORT – Oral rehydration therapy  |
| EBK – Empirical Bayesian Kriging                              | PEP – Poor and extremely poor   |
| EKATA – Empowerment Knowledge and Transformative Action       | PHC – Primary health care   |
| ERIE – Expanding the Reach of Impact Evaluations              | PLW – Pregnant and lactating women  |
| FAO – Food and Agriculture Organization of the United Nations | PPP – Purchasing power parity   |
| FCS – Food consumption score                                  | SHOUHARDO III – Strengthening Household Ability to Respond to Development Opportunities 3 |
| FFBS – Farmer Field and Business Schools                      | TNRVCC – Targeted nutrient-rich value-chain commodities                                   |
| FFP – Food for Peace  | U5 – Under-five   |
| GoB – Government of Bangladesh                                | UP – Union Parishad   |
| GPS – Global Positioning System                               | USAID – United States Agency for International Development                                |
| ICF – ICF International                                       | USD – United States dollar  |
| IGA – Income Generating Activity                              | VDC – Village development committee   |
| IRB – Internal Review Board                                   | VSLA – Village savings and loan association   |
| HDDS – Household Dietary Diversity Score                      | WASH – Water, sanitation, and hygiene   |
| HHS – Household Hunger Scale                                  | WE – Women’s empowerment  |
| IFPRI – International Food Policy Research Institute          | WHO – World Health Organization   |
| IYCF – Infant and young child feeding                         |   |
| LEB – Local Elected Body                                      |   |

## EXECUTIVE SUMMARY

This report presents an evaluation of the Strengthening Household Ability to Respond to Development Opportunities (SHOUHARDO III) project. The University of Notre Dame's Pulte Institute for Global Development, Aiddata, and Mathematica – alongside data collection assistance by Data Management Aid and several independent consultants – prepared this report as part of the Extending the Reach of Impact Evaluations (ERIE) project under contract AID-OAA-A-16-00025. ERIE is a cooperative agreement lasting from May 2016 until September 2025. This evaluation began in October 2019 and ended July 2023.<sup>1</sup> The research team primarily intends for this report to inform USAID's approach to fund similar programs in the future, though the findings also would ideally influence the program design and implementation of the evaluated implementing partners and other organizations conducting similar work.

The USAID Bureau for Humanitarian Assistance awarded this multi-year resilience food security activity (RFSA) to CARE International. SHOUHARDO III aims to address food and income insecurity, maternal and child health and nutrition, women's and youth empowerment, as well as improve access to public services for the rural poor, while building their resilience capacities. SHOUHARDO III sought to improve the gender-equitable food and nutrition security and resilience of the vulnerable people living in the char and haor regions of Bangladesh by 2020. Five purposes guided the project, specifically:

1. Increase equitable access to income for both women and men, and nutritious food for men, women, boys and girls.
2. Improve the nutritional status of children under five years of age, pregnant and lactating women and adolescent girls.
3. Strengthen the gender equitable abilities of people, households, communities and systems to mitigate, adapt to and recover from man-made and natural shocks.
4. Increase women's empowerment and gender equity at family and community level
5. Increase the provision and utilization of public services, i.e. local elected bodies (LEBs) and nation building departments (NBD) for *char* and *haor* communities, especially for poor and extremely poor (PEP) women.

The SHOUHARDO III program built on the successes and lessons learned from the SHOUHARDO I (2005-2010) and SHOUHARDO II (2010-2011) programs around nutrition, food security, livelihoods, women's empowerment, local governance, and climate change adaptation by adding market-strengthening components including the promotion of local service providers.

### EVALUATION DESIGN AND RESEARCH QUESTIONS

This report uses quantitative and qualitative data to measure the extent to which this strategy was effective. The data collection for the endline evaluation of this project began December 2021 and ended February 2022. Unfortunately, this was not done during the same timeframe as the baseline study was collected due to unavoidable delays. This fact impacted the comparability of pre-post data, as discussed in the Limitations Section. The data collection included household and child surveys in a randomly selected group of baseline treatment villages, as well as surveys in a newly selected group of comparison villages. A data collection team interviewed a randomly selected set of households from each village using a household and child survey. These surveys measured several different outcomes, including child nutrition, child stunting and underweight rates, household resiliency, and

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<sup>1</sup> Note that the evaluation faced significant delays due to closures and extensions related to the global COVID-19 pandemic. This report also experienced delays during the review process due to the presentation of the analysis. Thus, the research team finalized the report in 2023, approximately 1.5 years after data collection.

household food security. The analysis followed the methods outlined in the Data Treatment and Analysis Plan (Annex F) for the endline indicator calculations.

### IMPACT EVALUATION

This ex-post impact evaluation used several different data sources to re-create baseline conditions to identify non-treatment (comparison) villages that match treatment villages. The research team used baseline child stunting rates as the main indicator to match treatment and non-treatment villages, calculated using the 2014 DHS data. Balance tests and analytical adjustments are described in more detail in the methods section of this report. A data collection firm then collected survey data among a randomly selected sample of households in both the treatment and matched set of comparison villages. The impact evaluation focuses on comparing differences in villages with programming and comparison villages without it, in order to statistically estimate the program's impacts.

### PRE-POST ANALYSIS

The data are also used to calculate and compare a number of Bureau for Humanitarian Assistance (BHA) (formerly Food for Peace) project-specific indicators along with a set of resilience indexes and consumption measures from treatment villages before and after the project. The qualitative data provides insights into why and how these indicators have changed or not changed.

### QUALITATIVE DATA

The data collection also included in-depth interviews, focus group discussions, and observations in six treatment villages where the SHOUHARDO III interventions were most comprehensive, and where SHOUHARDO III most highly engaged the community in the project ("best-case scenario" communities).<sup>2</sup> The data includes information on whether interventions worked as planned and whether, how, and why outcomes resulted.

The research team used findings from the impact evaluation, the pre/post analysis, and the qualitative research to respond to five research questions:<sup>3</sup>

- **Question 1.1:** To what extent have the projects met their defined goals, purposes and outcomes?
- **Question 1.2:** To what extent have the projects developed resilience capacities and whether these capacities contributed or will likely contribute to sustain the food and nutrition security outcomes in the face of shocks?
- **Question 1.3:** In each technical sector, what are the strengths of and challenges to the efficiency and effectiveness of the interventions' implementation and their acceptance to the target communities?
- **Question 1.4:** To what extent have the projects strengthened local level systems and capacities of service and input providers to support the market-based input and service provisioning to prepare for the extension phase, and beyond the life of the project?
- **Question 1.5:** Have there been unintended consequences (either positive or negative) from the programming?

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<sup>2</sup> The qualitative evaluation team drew its sample from a list of villages where implementers of SHOUHARDO III considered implementation to have been the strongest and most complete, and where the communities were most engaged.

<sup>3</sup> Not all methods were used for each research question. The methods used for each research question are outlined in the findings sections below.

## FINDINGS

### QUESTION 1.1: TO WHAT EXTENT HAVE THE PROJECTS MET THEIR DEFINED GOALS, PURPOSES AND OUTCOMES?

The key findings from our pre-post and qualitative performance evaluations suggest that each of SHOUHARDO III's five main purposes contributed to varying extents to the program achieving its goal in the treatment villages. However, overall, the impact evaluation suggests that we are limited in being able to attribute some of these differences directly to the SHOUHARDO III program. The qualitative data from the communities with comprehensive programming sheds light on the quantitative results. An overview of these findings can be found below, broken down by the project's five purposes:

*Purpose 1: Increased equitable access to income for both women and men, and nutritious food for men, women, boys and girls*

- According to the **pre-post analysis**, households reported improvements in poverty including daily per capita expenditures used as a proxy for income<sup>4</sup> at the end of the program.
- According to the **pre-post and qualitative analyses**, the program was able to contribute to increased incomes through increased agricultural production, increased access to agricultural markets and crop prices, increased off-farm income, and increased access to financial services.

*Purpose 2: Improved nutritional status of children under five years of age, pregnant and lactating women and adolescent girls*

- The **pre-post analysis** indicated that women's nutritional status improved after the program, including a decrease in the prevalence of underweight women and the percent of births receiving at least 4 antenatal care visits.
- The **pre-post analysis** showed that children's nutritional status improved after the program. Notably, there was a 9.1 percentage point reduction in stunting between baseline and endline. The **impact analysis** indicated that we cannot confidently attribute this improvement to the program, however, since there were comparable nutritional statuses in non-treated villages at endline as well.
- The **pre-post and impact analyses** suggest that the program did have some effect on the sub-purposes (or intermediary outcomes) to achieving improved nutritional status among women and children. The impact evaluation found that women were significantly more likely to have improved dietary diversity compared to the comparison villages and the pre-post evaluation showed a large increase in children 6-23 months receiving a minimum acceptable diet. The **qualitative analysis** elucidated how the program achieved these sub-purposes by assessing the evidence for each outcome along the pathways to this sub-purpose.

*Purpose 3: Strengthened gender equitable ability of people, households, communities, and systems to mitigate, adapt, and recover from natural shocks*

- The **impact evaluation** showed that households in SHOUHARDO III villages that experienced major shocks were better able to mitigate the effects of the shocks—maintaining their food consumption—than households in comparison villages that also experienced major shocks.
- The **impact evaluation** showed that households in treated villages were also better able to recover from shocks through access to agricultural extension services and the adoption of sustainable agricultural and storage practices

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<sup>4</sup> As defined in the 2015 FFP Indicators Handbook (<https://www.fantaproject.org/sites/default/files/resources/FFP-Indicators-HB-I-Baseline-Final-Evaluation-Apr2015.pdf>)

- The **qualitative data** showed that SHOUHARDO III increased disaster awareness, preparedness, and access to services at the household and the community level, but the results of capacity building at the union level were more mixed.

*Purpose 4: Increased women's empowerment and gender equity at family and community level*

- The **pre-post analysis** showed improvements in women's mobility and decision-making. The overall percent of married women who need to seek permission to visit certain locals reduced nearly 20 percentage points and the percentage of married women aged 15-49 whose husbands help with household tasks increased by 61.1 percentage points in the pre-post analysis. However, the **impact analysis** showed mixed results. Younger women in treatment villages are slightly less likely to seek permission compared to comparison villages – indicating higher mobility and decision-making –, as did older women, though their percentage of permission-seeking was higher than younger women.
- The **pre-post analysis** indicated more equitable household relationships after the program, with the **qualitative analysis** showing this increased women's empowerment and gender equity.
- Although the **qualitative analysis** revealed that women's involvement in income generating activities and agricultural activities empowered them both socially and economically, the **pre-post analysis** showed limited improvements in women's contributions to overall household income. Participants from the qualitative interviews revealed that women in best-case scenario villages primarily spent their income on their children's health and education as well as investing in their income-generating activities. There is not sufficient data to determine if women's contributions to overall household income were different in the villages where the qualitative data were collected from the villages in the quantitative sample as a whole, but this is possible given the number of interventions that were enthusiastically undertaken in the qualitative villages. It is also possible that women in these villages started with lower incomes so that a small increase was significant to them.
- **Pre-post evaluation findings** showed only slight improvements in child marriage and early pregnancy, and the **impact evaluation** results show no meaningful differences in the age of women at marriage or first pregnancy between treatment and comparison villages. **Qualitative findings** in best-case-scenario villages suggested that there may have been reductions in the incidence of domestic violence and sexual harassment.

*Purpose 5: Increased provision and utilization of public services for communities, especially for poor and extremely poor (PEP) women*

- The **qualitative analysis** showed that SHOUHARDO III strengthened communities' ability to advocate for and demand social services and resources, particularly through community groups, resulting in the adoption of community priorities by union parishads in decision-making.
- The **qualitative analysis** showed SHOUHARDO III's efforts to strengthen the accountability of union parishads (UP) appeared to have limited results, and very few participants reported that the specific needs of poor and extremely poor (PEP) women were prioritized.

**QUESTION 1.2: TO WHAT EXTENT HAVE THE PROJECTS DEVELOPED RESILIENCE CAPACITIES AND WHETHER THESE CAPACITIES CONTRIBUTED OR WILL LIKELY CONTRIBUTE TO SUSTAIN THE FOOD AND NUTRITION SECURITY OUTCOMES IN THE FACE OF SHOCKS?**

One of the goals of SHOUHARDO III was to develop the resilience of both households and communities in program areas by providing knowledge, skills, and technologies to improve their abilities to absorb shocks and stresses, adapt to them, and transform to reduce the impact of shocks.

Below we describe the main shocks and stresses SHOUHARDO III households experienced over the past several years (including the COVID-19 pandemic, which coincided with endline data

collection); the extent to which participants perceive that the project helped households, communities and local systems to cope with and recover from these shocks; and finally, how SHOUHARDO III may have laid a foundation for greater resilience to future shocks and stresses.

- The **pre-post analysis** showed that, following SHOUHARDO III implementation, households perceived reduced exposure to shocks and reduced impact from shocks, but they also perceived less ability to recover from past and future shocks. Similarly, most indices of household resilience showed similar or reduced levels compared to baseline.
- **Qualitative evidence** from “best-case scenario” SHOUHARDO III communities contextualized these findings. While households reported using a variety of mitigation approaches to reduce the harmful effects of recent shocks and attribute these practices to SHOUHARDO III, the COVID-19 pandemic was such an extreme and unprecedented shock that households still reported using negative coping strategies and experiencing food insecurity. Since SHOUHARDO III did not focus attention on pandemic shocks, it is not a surprise that participants had not at the time built resilience to it.
- The **impact evaluation** comparing SHOUHARDO III communities to other, similar communities found no statistically significant differences between SHOUHARDO III villages and comparison villages on the Absorptive and Adaptive Resilience Indices. However, the evaluation did find large, positive, and statistically significant differences in the Transformative Resilience Index, driven by significantly higher rates of SHOUHARDO III respondents reporting access to agricultural extension services.
- The **impact evaluation** also suggests that households in SHOUHARDO III villages that experienced major shocks were better able to maintain their food consumption than households in comparison villages that also experienced major shocks. However, these protective benefits do not appear to have carried over to child stunting outcomes.

**QUESTION 1.3: IN EACH TECHNICAL SECTOR, WHAT ARE THE STRENGTHS OF AND CHALLENGES TO THE EFFICIENCY AND EFFECTIVENESS OF THE INTERVENTIONS’ IMPLEMENTATION AND THEIR ACCEPTANCE TO THE TARGET COMMUNITIES?**

SHOUHARDO III aimed to promote equitable food and nutrition security through a deeply multisectoral approach that explicitly targeted the poorest and most vulnerable households in *char* and *haor* communities. The impact evaluation provides important evidence on the breadth of participation in various types of programming compared to other, similar communities. Additional analyses by household poverty levels and the gender of the head of household assess the extent to which the program reached the most vulnerable community members. Evidence from the qualitative evaluation in best case scenario villages where program implementation was especially strong provide complementary evidence of the strength and inclusiveness of implementation, and indicate *how* these results may have been achieved.

- The **impact evaluation** found that SHOUHARDO III raised household participation in many program sectors, including health, agriculture, nutrition, business, and disaster-focused programs relative to comparison communities.
- SHOUHARDO III had significant impacts on participation among poor households in business, health, and nutrition programming. Female-headed households saw particularly large improvements in participation particularly in business programs.
- SHOUHARDO III effectively targeted services to the most food-insecure, Poor and Extremely Poor members of best-case scenario communities, and its multi-generational and gender-inclusive approach to its interventions facilitated community acceptance.
- SHOUHARDO III’s collaboration, coordination and integration of activities with local government and with other program implementers facilitated effective intervention implementation and acceptance.
- Some participants struggled to balance their participation in SHOUHARDO III activities with their home and other community obligations.



**QUESTION I.4: TO WHAT EXTENT HAVE THE PROJECTS STRENGTHENED LOCAL LEVEL SYSTEMS AND CAPACITIES OF SERVICE AND INPUT PROVIDERS TO SUPPORT THE MARKET-BASED INPUT AND SERVICE PROVISIONING TO PREPARE FOR THE EXTENSION PHASE, AND BEYOND THE LIFE OF THE PROJECT?**

SHOUHARDO III aimed to strengthen local level input and service providers and systems to support input and service provisioning beyond the life of the project. To accomplish this, they engaged the local private sector, including local and multinational companies, to provide critical goods and services such as agricultural inputs and vaccinations to SHOUHARDO III community members. In order for these systems to have long-term effects, they must be sustainable and adaptable to changing circumstances. This section relies on in-depth qualitative data from where implementation was especially strong, and integrates the perspectives of both community members and service providers to SHOUHARDO III communities.

The sustainability of the local market-based approach to input and service provisioning will depend on both sustained community demand and willingness to pay for the inputs and services, as well as the capacities, resources, linkages and motivation of the service providers in sectors targeted by SHOUHARDO III. Through the qualitative analysis, the research team found that

- After sensitization by SHOUHARDO III and LSPs, households in communities where implementation was strongest were generally willing to pay for a variety of inputs and services from LSPs.
- LSPs in most sectors described having strong motivation to continue offering their services and capacities to combine information and service provision in ways that support continued demand.
- LSPs across different sectors described a wide variety of supply side, demand side, and capacity building-related linkages that they use to grow and sustain their businesses.
- Livestock vaccinators in particular face unique challenges in terms of households' willingness to pay, the knowledge and capacity to continue to perform their work, maintaining linkages with suppliers, access to transportation, and profitability, which pose long-term risks to the sustainability of their service provisioning.

**QUESTION I.5: HAVE THERE BEEN UNINTENDED CONSEQUENCES (EITHER POSITIVE OR NEGATIVE) FROM THE PROGRAMMING?**

Development activities sometimes have unintended consequences. Positive, but unanticipated consequences can occur when interventions spill over within and across communities, or when interventions change behavior in ways that were not anticipated by a theory of change. Negative unintended consequences can occur when activities unintentionally incentivize harmful behaviors, or when they cause broader environmental changes. Since these outcomes are, by definition, unanticipated, this section relies on qualitative evidence collected in communities where implementation was especially concentrated and thus, where unintended consequences may have been more likely and more strongly linked to the intervention.

- There were no widely reported negative consequences from SHOUHARDO III.
- Evaluators identified some evidence of unintended positive outcomes, including increased educational support for PEP children, and spillover of VSLAs and agricultural practices within and across communities.

## **CONCLUSIONS**

Overall, the research team found that there was progress over time in each of SHOUHARDO III's focus areas, and that each area – to varying extents – contributed toward SHOUHARDO III's goal in the treatment villages. These findings can be further explored in the planned ex-post evaluation, to be conducted in subsequent years. However, impact evaluation results suggest that the research team is limited in being able to attribute most of these differences directly to the SHOUHARDO III program. In general, there is limited evidence that the conditions at endline in SHOUHARDO III

program villages were different from those in comparison villages. Reflecting on the outcomes of the SHOUHARDO III program, the research team offers the following recommendations for the final stages of implementation (known as SHOUHARDO III Plus) as well as implementers of other, similar programs. The following recommendations can also be found in the Conclusion section in more detail:

- **Sustainability of local market systems:** Given that the likelihood of the sustainability of local service and input providers varies by sector, findings on the successes and challenges of the LSP system from the qualitative evaluation demonstrate how critical it is for implementers of other programs that aim to build sustainable market systems to account for the unique market factors associated with each sector. SHOUHARDO III Plus should pay particular attention to addressing the sustainability challenges faced by animal vaccinators.
- **Youth training:** SHOUHARDO III trained select youth in industries that required them to leave *char* and *haor* areas in order to find employment. Though there may be positive outcomes from diversified income sources, internal migration may lead to future unintended social and economic consequences for communities. Program implementers may want to consider local economies when selecting industries in which to offer youth training programs.
- **Child nutrition:** Given the limited differences between treatment and comparison villages on most child nutrition outcomes, the program team might wish to build on its area of success (young children receiving a minimally acceptable diet) and consider how to ensure that activities aimed at other short-term outcomes (exclusive breastfeeding and children's diarrhea) are adapted, deepened or otherwise improved. Even though stunting is tied to many factors, including but not limited to undernutrition (USAID 2021), future research could further explore this connection and speak to the merits of using stunting rates, which are costly and challenging to measure, as a key outcome for such programming.
- **WASH:** There were significant gains made in many areas of household outcomes, including WASH-associated outcomes such as access to improved water sources, use of handwashing stations with soap and water, and use of improved sanitation facilities. However, persistent difficulties continue to be present among these gains, such as the fact that fewer households at the endline have water sources within 30 minutes than at baseline, highlighting the need for greater integration of natural resource management activities in future programming.
- **Women's economic empowerment:** Similar to the WASH sector, some women's empowerment and related outcomes appear to have improved between baseline and endline, while others, such as access to and use of contraceptives, and access to agricultural credit remain challenges. The program team should reflect on how to target women-specific barriers to resiliency and economic empowerment such as by promoting agricultural practices that take into account women's existing time burdens.
- **Resilience:** Despite significant improvements in transformative resilience capacities, including access to formal safety nets and agricultural services, SHOUHARDO III communities did not show improvements in absorptive or adaptive resilience. Future programming might focus on development of these capacities, through informal safety nets, savings, formal financial services, education and asset ownership for the most vulnerable households.
- **Evaluation design:** This study utilized three evaluation strategies (pre/post, impact evaluation and qualitative methods) to provide a rich depiction of the effect of the SHOUHARDO III program on the communities where it was implemented. In particular, the research team used innovative data sources and methods to construct a counterfactual, when one was not identified at the start of the activity. Such a retrospective impact evaluation does not allow for typical balance tests on a large set of baseline variables, which can demonstrate if the treatment and comparison groups are statistically comparable.<sup>5</sup>

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<sup>5</sup> Future studies could also explore more robust balance tests, using the full secondary dataset. For example, this study tested for balance using the main matching variable which was available in the 2014 DHS dataset

Future studies of similar food security interventions could build on our evaluation strategy by **planning for an impact evaluation from the start**. Implementers can work with evaluators to identify a comparison group at the start of an activity, through random assignment or quasi-experimental methods. We encourage implementing partners to take this step when designing future programming.

## I. EVALUATION BACKGROUND AND OBJECTIVES OVERVIEW

### BACKGROUND

Bangladesh has made progress addressing some of the key challenges facing its population including health access, job availability, and poverty. The number of people living below the poverty line decreased from 31.5% in 2010 to 20.5% in 2019, and progress continues to be made. There remains a heavy focus on factors such as increasing the number of available jobs and empowering minority populations to enter the workforce. Expanding healthcare access and services has led to great strides in battling many prevalent diseases as well. In 2019, cases of malaria dropped to 1.6 per 1,000 compared to 4.3 in 2015, and tuberculosis and HIV levels continue to decline. The social standards of living have also increased in areas such as education, with the rate of adult literacy increasing by 20% between 2005 and 2018 (General Economics Division, 2020).

While significant progress has been made toward achieving many of Bangladesh's development goals, many areas still require a greater focus to meet global standards. Specifically, access to food and subsequent nutritional wellbeing remains at the forefront of the country's challenges. Nearly 15% of the population in Bangladesh was malnourished in 2017, only a minor decrease from 16.4% in 2016. In 2019, 28% of children under the age of 5 qualified as stunted and almost 10% as wasted (General Economics Division, 2020). Because these numbers remain high, the government continues to adopt policies to target this health challenge. Efforts focus on ensuring that growing threats of climate change and population growth do not hinder food access (General Economics Division, 2020). Additionally, local and international projects aim to support school food programs, instituting nutrition education programs, and supplying investment grants in order to promote financial security (WFP, 2022).

Addressing problems regarding poverty and food security is an increasingly difficult task in Bangladesh due to challenging environmental conditions. The country has faced an unprecedented number of natural disasters such as cyclones, tidal storms, tornados, and hailstorms. In these conditions, consistent agriculture production is difficult to achieve, threatening both food resources and household income. Additionally, seasonal changes have brought about periods of drought and floods, making it difficult to adapt to ever-changing conditions (Food and Agriculture Organization of the UN, 2022). As these climate factors are predicted to only intensify, building resilience in the population is key to creating sustainable growth in food security (USAID, February 2015).

### CURRENT FOOD SECURITY SITUATION IN SHOUHARDO III PROJECT AREAS

SHOUHARDO III targeted the deep *haor* and remote *char* areas of Bangladesh. *Haor* are wetland ecosystem areas, while *char* are islands and newly deposited lands that emerge in waterways through sedimentation (see figures below). A majority of people in the *haor* areas are reliant on farming and fishing. The farmers are typically monocroppers, which makes monsoon flash floods devastating for household livelihoods and their food stocks (Parvez et al, 2021). The sandy soil in the *char* areas makes the areas difficult to cultivate and frequent erosion causes households to move regularly (WFP, 2004). Land is also often owned by a few influential individuals making it expensive to lease

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(stunting), but future studies can conduct balance tests using additional DHS variables, such as income or consumption. This was beyond the scope of this evaluation but could be useful in the future when an impact evaluation cannot be planned from the start.

and cultivate land (Bangladesh CSI, 2015). Moreover, due to their remoteness, *char* and *haor* households face additional difficulties accessing markets, diverse sources of food and supportive services that can help reduce food insecurity. These factors all contribute to food insecurity, high poverty and unemployment rates, and poor maternal and child health in these areas.

Figure I.1: Google earth imagery of two SHOUHARDO III communities

*Haor* community



*Char* community



#### FOOD AVAILABILITY AND FOOD ACCESS

Among all countries across the globe, Bangladesh is predicted to experience the 6th largest impact from continuing climate change (USAID, 2016). As climate change worsens, scientists predict already devastating weather conditions will intensify, the incidence of pests will rise, and fish stocks will continue to diminish. In addition to these consequences, Bangladesh is losing agricultural land due to encroachments from urban areas and road projects as well as increased soil erosion and loss of fertility. Inadequate production has led to shortages in fertilizers, seeds, pesticides, and irrigation products. This combination of effects requires urgent attention in order to prevent detrimental impacts on food availability and access. Access to food sources is already beginning to vary widely among geographic regions and social statuses. Additionally, due to less access to employment opportunities and education, women are disproportionately affected by malnutrition. This leads to similar trends in their children (General Economics Division, 2020).

#### GOVERNMENT PROGRAMS

The government of Bangladesh continues to institute policies with the goal of improving food security and lowering rates of malnutrition. Specifically, the government has taken action to combat these negative trends in a number of areas:

- Climate change (Climate Change Strategy and Action Plan 2009, National Plan for Disaster Management)
- Agriculture production (Country Investment Plan, National Agricultural Policy)
- Nutrition (Country Investment Plan, National Food Policy)
- Food security (Country Investment Plan, National Food Policy)
- Healthcare (Health, Population and Nutrition Strategic Development Plan)
- Resilience to environmental conditions (National Plan for Disaster Management)
- Social and financial safety nets (National Social Protection Strategy)

In addition to Bangladesh government interventions, the United States has attempted to institute multiple supportive programs.

## OVERVIEW OF THE SHOUHARDO III ACTIVITIES

USAID's Bureau for Humanitarian Assistance (BHA) resilience food security activities (RFSAs) in Bangladesh aim to reduce chronic and acute malnutrition and food insecurity, and improve resilience to disasters among vulnerable populations. In pursuit of these goals, USAID BHA awarded funding to three organizations to implement multi-year development food security projects in various districts in Bangladesh:

1. The Strengthening Household Ability to Respond to Development Opportunities 3 (SHOUHARDO III) project, implemented by CARE and several partners in 8 districts in the Char and Haor regions<sup>6</sup> (October 2015 - December 2023);
2. The *Nobo Jatra* Project, implemented by World Vision, Inc. and several partners<sup>7</sup> in Khulna and Satkhira districts (October 2015 - December 2022); and
3. The Sustainable Agriculture and Production Linked to Improved Nutrition Status, Resilience, and Gender Equity (SAPLING) Project, implemented by Helen Keller International (HKI) and several partners<sup>8</sup> (October 2015 - December 2021).

This report will focus on the SHOUHARDO III project (AID-FFP-A-15-00009), implemented by CARE and six other partners: the Eco-Social Development Organization (ESDO), the National Development Programme (NDP), POPI, the Dhaka Ahsania Mission (DAM), the Samaj Kallyan Sangstha (SKS) Foundation, and Mahideb Jubo Somaj Kallayan Somity (MJSKS). The Regional Integrated Multi-Hazard Early Warning System (RIMES) and the International Development Enterprises (iDE) provided technical support. The project was a five-year, multi-sectoral program that ran from 2015 until 2020 with an additional two-year extension until 2022. The program aimed to address food and income insecurity, maternal and child health and nutrition, and women's and youth empowerment, and to improve access to public services for the rural poor while building their resilience capacities. The six aforementioned NGOs supported implementation in 947 villages in 115 unions in 23 upazilas in 8 districts in northern Bangladesh. The goal of the program was to achieve improved gender equitable food and nutrition security and resilience for vulnerable people living in the flood-prone Char and Haor Regions of Bangladesh by 2020. SHOUHARDO III targeted these districts, and communities within the districts, according to four thresholds related to poverty, stunting and underweight status, and vulnerability to natural disasters.<sup>9</sup> Within the communities, targeted individuals varied by activity but included a targeted 55% of Poor and Extremely Poor households (PEP), pregnant and lactating women, and children aged 6-23 months. SHOUHARDO III identified vulnerable populations through a well-being analysis (WBA), a one-time process conducted in March and April 2016. The WBA categorized all the households living in the selected villages and identified the PEP households. Households were grouped by analyzing their well-being status, which includes land ownership, condition of home, and nutritional status, income level, income sources, occupation, and education, access to services, seasonal migration, day laborers / advance labor sale, and food insecurity. The project was expected to have a lasting impact by the end of its life on around 675,000 persons (Tango International, 2018).

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<sup>6</sup> These districts include Kurigram, Gaibandha, Jamalpur, Sirajganj, Netrakona, Sunamganj, Kishoreganj, and Habiganj

<sup>7</sup> World Vision implemented the project with support from World Food Program, Winrock International, and local NGOs Shushilan, Nabolok and CODEC and worked closely with the Government of Bangladesh through the Ministry of Disaster Management and Relief.

<sup>8</sup> SAPLING partners include Catholic Relief Services (CRS), Caritas Bangladesh, iDE, and three local non-governmental organizations: GRAUS, Tahzingdong and Toymu

<sup>9</sup> CARE International, FY2015 Title II DFAP for Bangladesh – May 28, 2015

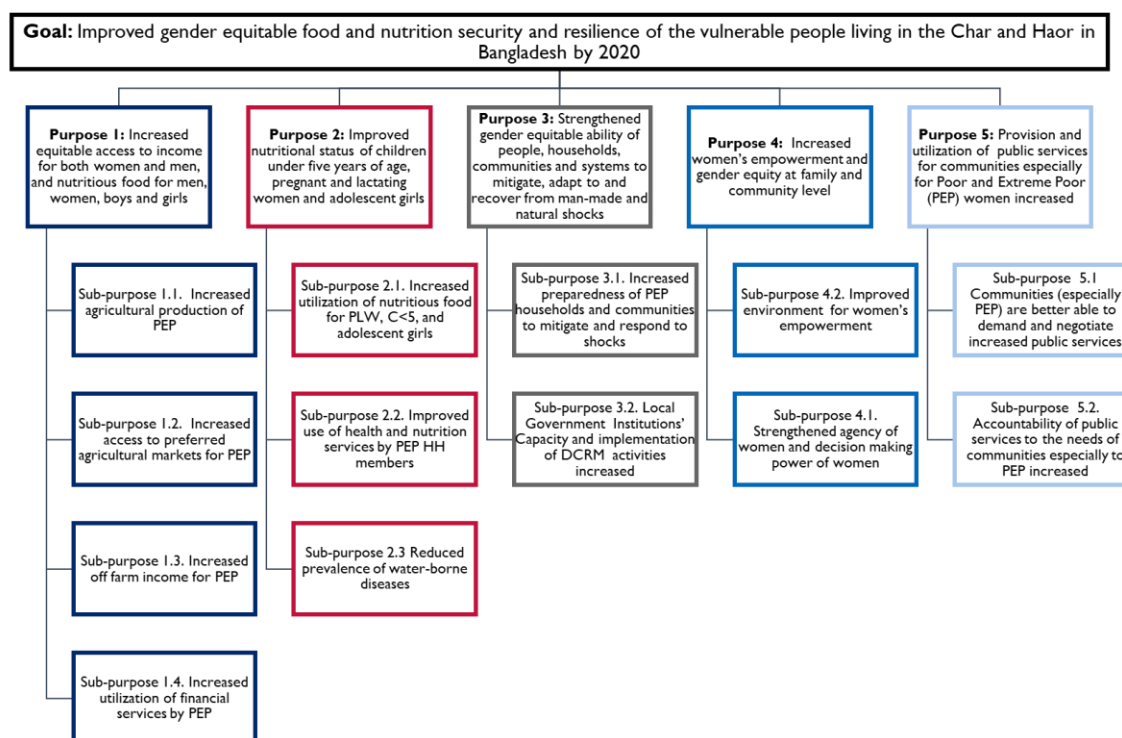
## THEORY OF CHANGE OF SHOUHARDO III

SHOUHARDO III sought to improve the gender equitable food and nutrition security and resilience of the vulnerable people living in the *char* and *haor* in Bangladesh by 2020. The project aimed to accomplish this through five strategies:

1. Increase equitable access to income for both women and men, and nutritious food for men, women, boys and girls.
2. Improve the nutritional status of children under five years of age, pregnant and lactating women and adolescent girls.
3. Strengthen the gender equitable abilities of people, households, communities and systems to mitigate, adapt to and recover from man-made and natural shocks.
4. Increase women's empowerment and gender equity at family and community level
5. Increase the provision and utilization of public services, i.e. local elected bodies (LEBs) and nation building departments (NBD) for *char* and *haor* communities, especially for poor and extreme poor (PEP) women.

In Figure 1 below, we provide a high-level version of SHOUHARDO III's theory of change, reflecting the goal, the purposes (or strategies) and the sub-purposes designed to meet the goal. In Appendix A, we provide SHOUHARDO III's original theory of change, which provides additional details on the outputs that were expected to contribute to each of the purposes.

Figure 2.1: Summary of SHOUHARDO III's Theory of Change



## EVALUATION OBJECTIVES AND OVERVIEW OF RESEARCH QUESTIONS

The goal of the SHOUHARDO III performance evaluation was to provide funders, implementers, and other interested parties with findings on how effective the SHOUHARDO III program is at strengthening food security in program areas. This information can help inform decisions about

future food security programs to ensure the most effective programs for these geographic locations. The evaluation team evaluated the contribution of SHOUHARDO III to USAID's efforts *to reduce food insecurity among chronically food insecure communities (villages)* utilizing both qualitative and quantitative data. This report discusses project outcomes in the context of the research questions below.

**Research Question I.1:** To what extent has SHOUHARDO III met its defined goal, purposes and outcomes?

Using empirical evidence, the evaluation describes the progress or non-progress found along the hypothesized pathways of change. The evaluation team reviewed (1) the key assumptions of SHOUHARDO III and adaptations made to accommodate contextual changes over the past five years; (2) factors that promoted or inhibited the achievement of the project objectives; (3) the plausibility of pathways and the determinants of achieving the key outcomes; (4) targeting strategies and their contributions to achieving project goals (especially with regard to gender and reaching the most vulnerable); and (5) the practices that have been adopted as a result of the SHOUHARDO III programming.

**Research Question I.2:** To what extent has SHOUHARDO III developed resilience capacities; and have these capacities contributed or will likely contribute to sustain the food and nutrition security outcomes in the face of shocks?

Using qualitative and quantitative methods, the team evaluated the role of institutions and systems established or strengthened by SHOUHARDO III independently or in collaboration with the private sector, Government of Bangladesh, community organizations, NGOs, and research organizations to improve and maintain resilience capacities. The analysis investigated differences in household resilience capacities and the role of these capacities to absorb covariate and idiosyncratic shocks, and determined the likelihood of these capacities to sustain and further improve food and nutrition security outcomes in the face of future shocks. Using quantitative and qualitative empirical evidence, the evaluation also describes how the capacities contributed or will likely contribute to household resilience in the face of shocks.

**Research Question I.3:** In each technical sector, what are the strengths of and challenges to the efficiency and effectiveness of the interventions' implementation and their acceptance to the target communities?

The team evaluated the effectiveness and relevance of the technical interventions to achieve project outcomes. This report discusses those findings in relation to SHOUHARDO III's theories of change. The research uses both quantitative and qualitative methods where possible when discussing the following: (1) factors in the implementation and context associated with greater or lesser efficiency and effectiveness in producing outputs of higher or lower quality; (2) the interventions and implementation processes deemed more/less acceptable to members of the target communities.

**Research Question I.4:** To what extent has SHOUHARDO III strengthened local level systems and capacities of service and input providers to support the market-based input and service provisioning to prepare for the extension phase, and beyond the life of the project?

The evaluation team assessed progress towards sustaining the outcomes and critical services necessary to continue sustainable service provisioning using private and public sector input and service providers. Using qualitative methods, the evaluation team also assessed (1) the capacity of local level service providers to support each key outcome; (2) the motivation of service providers to continue service provisioning, the motivation of communities to seek services, and communities'

willingness to pay; and (3) what has been done to facilitate linkages to resources that the service providers would need to continue service provisioning after the project ends.

**Research Question 1.5:** Have there been unintended consequences (either positive or negative) from the programming?

The evaluation team also used qualitative methods to address the following questions: What unexpected changes have occurred as a consequence of SHOUHARDO III programming? What are the effects of these changes on improving or sustaining household food and nutrition security?

## **ROADMAP OF REPORT**

This report will start by giving a detailed overview of the evaluation approach, including an explanation of the three datasets and types of analysis used, the sampling strategy for each type of data, and evaluation limitations. Next, the report summarizes the answers to the research questions with both quantitative and qualitative data. It ends with a set of conclusions and recommendations for future projects.

## **2. EVALUATION METHODS AND LIMITATIONS**

### **SUMMARY OF EVALUATION APPROACH**

The SHOUHARDO III evaluation enhanced the originally planned endline evaluation of the SHOUHARDO III project, which would have relied on a pre-post evaluation design alone. Instead, the evaluation also includes a rigorous impact evaluation using a matched comparison village design and a qualitative performance evaluation of project implementation, performance, and sustainability. The added impact evaluation used a treatment and a comparison village, whose selection is described below, to answer a subset of the research questions. The qualitative evaluation focused on best cases of program implementation of SHOUHARDO III to add insights into the dynamics of how and why outcomes were or were not achieved and to answer at least in part all research questions.

Data Management Aid and a team of local consultants collect qualitative data from October to November 2021. Data Management Aid collected quantitative data for both the impact evaluation and pre-post evaluation from December 2021 to February 2022.

### **OVERVIEW OF THE THREE EVALUATION METHODS USED**

For the SHOUHARDO III evaluation, the research team conducted three types of evaluations: an impact evaluation, pre-post evaluation, and qualitative performance evaluation. Each of these evaluations offer different strengths based on how they are designed, allowing researchers to measure intervention outcomes in different ways. These three evaluations are explained in the sections below, including what they can and cannot tell researchers about intervention outcomes and how the findings from these different evaluations were used together in the SHOUHARDO III evaluation. Table 2.1 summarizes what these three evaluation methods measure, their strengths and limitations, and what findings they provide for the SHOUHARDO III evaluation.<sup>10</sup>

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<sup>10</sup> Not all evaluation methods were used to answer each research question. The methods used for each research question are listed in detail in the findings for the research questions later in the report.



**Table 2.1: Methods used in the SHOUHARDO III evaluation, what they measure, and their strengths and limitations**

|   | <b>Impact evaluation</b>  | <b>Pre-post evaluation</b>   | <b>Qualitative performance evaluation</b>  |
|---|---|--|--|
| <b>What does this method measure?</b>                                 | <ul style="list-style-type: none"> <li>Measures differences in outcomes with, versus without, an intervention to answer cause-and-effect questions about intervention effects</li> </ul>  | <ul style="list-style-type: none"> <li>Measures changes in outcomes for a population who received an intervention(s) before and after the intervention</li> <li>Does not measure what caused the changes in outcomes</li> </ul>          | <ul style="list-style-type: none"> <li>Examines how and why an intervention achieved or did not achieve outcomes of interest</li> <li>Examines perceived strengths and weaknesses of an intervention</li> </ul>  |
| <b>How does this method achieve this measurement?</b>                 | <ul style="list-style-type: none"> <li>Compares outcomes of interest for groups that received the intervention (“treatment groups”) and for comparison groups that did not receive the intervention but who share the same observable characteristics as the treatment group</li> </ul> | <ul style="list-style-type: none"> <li>Compares outcomes of interest before and after the intervention for a single group that received the intervention</li> <li>Does not compare outcomes of interest to a comparison group</li> </ul> | <ul style="list-style-type: none"> <li>Examines and locates trends in perceptions of how and why an intervention achieved outcomes of interest from different stakeholders implementing or participating in the intervention</li> </ul>  |
| <b>What are the strengths and limitations of this method?</b>         | <ul style="list-style-type: none"> <li>Can attribute differences in outcomes of interest to the intervention (i.e., can establish causality)</li> <li>Cannot establish the facilitators or barriers to an intervention success</li> </ul>   | <ul style="list-style-type: none"> <li>Can provide information about the direction and magnitude of change over time</li> <li>Cannot establish causality of an intervention and outcomes</li> </ul>                                      | <ul style="list-style-type: none"> <li>Can uncover pathways of change and facilitators or barriers of intervention success, including unintended ones</li> <li>Can capture factors that are difficult to quantify, such as perceptions of inclusivity or opinions about the value of outcomes</li> <li>Cannot establish causality of an intervention or outcome</li> </ul> |
| <b>What can this method tell us for the SHOUHARDO III evaluation?</b> | <ul style="list-style-type: none"> <li>Whether there are differences in agriculture, nutrition, health, and resilience outcomes caused by the SHOUHARDO III intervention</li> </ul>   | <ul style="list-style-type: none"> <li>Whether there were changes over time in agriculture, nutrition, health, and resilience outcomes among people in the SHOUHARDO III intervention communities</li> </ul>                             | <ul style="list-style-type: none"> <li>How aspects of the SHOUHARDO III intervention were perceived to contribute to or impede changes in agricultural, nutrition, health, and resilience outcomes</li> <li>How interventions or broader changes may have contributed to or limited achievement of outcomes.</li> </ul>  |

Impact evaluations measure quantitative differences in outcomes of interest with and without an intervention. They are used in order to demonstrate that an intervention, rather than other potential factors, caused the differences in outcomes after an intervention. Impact evaluations are able to attribute outcome differences to an intervention by comparing a situation where the intervention occurred to a situation where the intervention did not occur, or counterfactual (USAID 2021). Researchers construct this counterfactual by choosing a group that is as similar as possible to the group that received the intervention in characteristics that could affect the outcomes.

The ideal method of constructing a counterfactual is the randomized controlled trial (RCT), which is when the researcher assigns individuals or communities to treatment or control status randomly, prior to program implementation. However, randomization is often not feasible for reasons both ethical and practical. In such cases, researchers turn to “quasi-experimental methods,” which seek to mimic this experimental method.

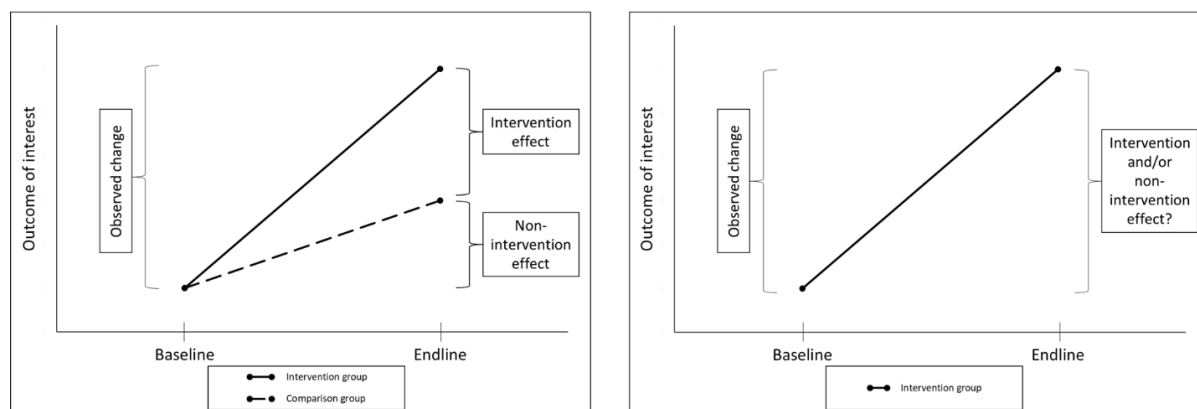
There are many quasi-experimental methods, one of which is matching. A current growing area of impact evaluations is matching methods that use geospatial or geo-coded data.<sup>11</sup> To understand if an evaluation method “worked” in creating two comparable groups, researchers can conduct balance tests. Researchers can compare the means or distributions of important characteristics between intervention and comparison groups at the start of the intervention to ensure that they are similar (and that any differences are merely due to chance). If the balance tests show that the two groups are well matched, the primary difference between the intervention and comparison groups is the intervention, which means that any differences in outcomes between the groups are likely because of the intervention. If outcomes between the group that received the intervention and the group that did not receive the intervention are similar, this means that any differences in the outcomes are likely not due to the intervention because these changes also occurred in the group without the intervention. If there are differences in outcomes between the intervention group and comparison group, then these differences are likely due to the intervention because the intervention is the main difference between the groups when it comes to factors likely to affect the outcomes. By measuring the difference in outcomes between groups with and without the intervention, researchers are able to determine the amount of impact that is due to the intervention and the amount of impact due to other factors, as shown in Figure 2.1. The impact evaluation compares differences between comparison households and households in SHOUHARDO III villages at endline (not changes between baseline and endline).

Pre-post evaluations measure quantitative changes in outcomes for a target population before and after an intervention. Pre-post evaluations can uncover whether positive, negative, or no change occurred after an intervention, but cannot determine what caused these changes (see Figure 2.2). Unlike impact evaluations, pre-post evaluations do not use a comparison group. Without a comparison group, researchers are unable to determine whether observed outcome changes are due to the intervention or if these changes would have happened even without the intervention because of other factors. The pre/post evaluation compares changes between baseline and endline for the pre-post indicators in only the households in SHOUHARDO III villages.

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<sup>11</sup> For an example of the use of such methods in an evaluation of a USAID activity, see here: BenYishay, A., Velyvis, K., Nolan, K., Khatiwada, L. K., Dolan, C., Guzman, D. B., & Purekal, T. (2019). Long-term Impact Evaluation of the Malawi Wellness and Agriculture for Life Advancement Program [Evaluation]. USAID. [https://pdf.usaid.gov/pdf\\_docs/PA00W4GV.pdf](https://pdf.usaid.gov/pdf_docs/PA00W4GV.pdf) To learn more about geo-spatial impact evaluation, see this website for video explanations, and examples of the use of the method to evaluate a variety of programs: <https://www.aiddata.org/gie>

Figure 2.2: Impact evaluation findings (left) and Pre-post evaluation findings (right)



Note: Figures adapted from USAID Technical Note on Impact Evaluations, February 2021. Available at: <https://usaidlearninglab.org/resources/technical-note-impact-evaluations>

While impact and pre-post evaluations measure whether differences in outcomes occurred or not, qualitative performance evaluations focus on how and why any changes occurred during an intervention. Qualitative evaluations are used to understand the process by which changes occurred, what contributed to changes, and what prevented changes from occurring. Qualitative research is also useful in understanding the implementation process of an intervention, any challenges to or successes in implementation, and what worked well and what could be improved in future interventions. By collecting data through interviews, focus groups, and observations, qualitative evaluations allow researchers to have a more in-depth understanding of an intervention and its effects from the perspective of intervention participants, implementers, and any others involved in the intervention.

For the SHOUHARDO III evaluation, the research team used these three evaluation methods to understand the intervention outcomes in different ways. For example, to evaluate women’s dietary diversity outcomes, the team used a pre-post evaluation to assess whether any changes in dietary diversity occurred by comparing dietary diversity before and after SHOUHARDO III implementation; an impact evaluation to evaluate whether these differences were due to SHOUHARDO III; and a qualitative evaluation to understand which aspects of SHOUHARDO III might have contributed most to these differences.

- Pre-post evaluation. To assess changes in women’s dietary diversity before and after the SHOUHARDO III program, the research team conducted a pre-post evaluation. The research team found that dietary diversity among women improved from before to after the SHOUHARDO III program. However, with the pre-post evaluation findings alone, the team was unable to determine if this was due to the intervention or other factors. Examples of other factors could include widespread changes in household income due to rising prices of commodities, impacts from COVID,<sup>12</sup> changes in food security due to improved weather patterns, or increased availability of vegetables due to government subsidies—factors that also affect dietary diversity that were not measured.
- Impact evaluation. To determine whether dietary diversity improvements were caused by the SHOUHARDO III intervention, researchers conducted an impact evaluation. The research team constructed a comparison group with characteristics similar to the intervention village at baseline in terms of factors that affect dietary diversity. The research team found that the differences in dietary diversity in the intervention villages was greater

<sup>12</sup> For more information on COVID’s impacts on households in the treatment and comparison villages, see Annex M.

than the differences in dietary diversity in the comparison villages. Therefore, the research team was able to attribute this difference to the intervention because this difference only occurred in the intervention villages and not in the comparison villages.

- Qualitative performance evaluation. To understand how and why the SHOUHARDO III intervention contributed to improved dietary diversity, the research team conducted a qualitative evaluation. By analyzing in-depth perspectives on the intervention, the team was able to uncover that certain activities of the intervention, including increased knowledge on the benefits of dietary diversity, increased access to nutritious food through food rations or cash stipends, increased homestead crop and livestock production, and equitable decision-making within households, were reported to facilitate women's increased consumption of diverse diets. These contributors are discussed in detail in the findings section below.

In the following sections, we describe the sampling strategy used for each methodology. Annex D provides detailed information on the impact evaluation comparison village selection approach, COVID-19 sampling strategy, data sources, quantitative topics covered, and the data analysis plan. Annex D also provides detail on the qualitative topics discussed, the data collection strategy, and the qualitative analytical approach.

The research team from the USAID-funded mechanism called ERIE conducted this evaluation. ERIE stands for Expanding the Reach of Impact Evaluation. This mechanism aims to conduct retrospective long-term impact evaluations on USAID-funded activities, across a variety of sectors. The mechanism typically completes evaluations where a counterfactual can be identified ex-post, using existing datasets such as satellite imagery, nighttime lights, mobile or administrative data. This is an innovative approach to impact evaluation which particularly focuses on long-term impact and sustainability.<sup>13</sup> It is being piloted in the USAID community.

## **SAMPLE SELECTION FOR EACH EVALUATION METHOD**

### **IMPACT EVALUATION SAMPLE SELECTION**

To implement the impact evaluation, the ERIE research team needed to identify a comparison group that were similar to the intervention villages at baseline - before the interventions began. The research team used stunting rates calculated from the 2014 Bangladesh Demographic and Health Survey (DHS) to identify matched comparison villages for the SHOUHARDO III villages. ERIE matched the comparison villages, which did not receive the SHOUHARDO III intervention, to the SHOUHARDO III villages based on the similarity of their baseline child stunting rates. Matching methods are a common quasi-experimental method when random assignment is not possible; this method has been used in many fields of study for causal inference.<sup>14</sup> The evaluation team matched villages on child stunting rates and a variety of geospatial variables (see Annex D for more information) due to the importance of this measure for understanding welfare and living conditions.<sup>15</sup> The evaluation team focused on utilizing stunting rates to match villages and did not include other baseline metrics into the village matching.

The research team used a multi-stage sampling process to construct the treatment and comparison villages. In the first stage of sampling, 60 villages were randomly selected from the SHOUHARDO III villages surveyed by ICF at baseline in 2016. The research team estimated the stunting rates for

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<sup>13</sup>For more information on the ERIE mechanism, see here: <https://www.usaid.gov/PPL/MERLIN/ERIE>

<sup>14</sup> Stuart EA. Matching methods for causal inference: A review and a look forward. *Stat Sci.* 2010 Feb 1;25(1):1-21. doi: 10.1214/09-STS313. PMID: 20871802; PMCID: PMC2943670.

<sup>15</sup> USAID Advancing Nutrition. 2021. Beyond Stunting: Complementary Indicators for Monitoring and Evaluating USAID Nutrition Activities. Arlington, VA: USAID Advancing Nutrition.

these 60 villages at baseline using the 2014 DHS data to obtain village level child stunting estimates (this is discussed in detail in Annex D). The team then estimated child stunting rates across all of Bangladesh using the 2014 DHS data and other geospatial indicators such as travel times, temperature, nighttime lights, elevation, and a vegetation index (for the full list, see Annex D). Utilizing the 2014 DHS data for both treatment and comparison selection allowed comparability across both groups of villages. Using a list of villages provided by the Bangladesh Bureau of Statistics, the research team selected a pool of non-SHOUHARDO III villages near the treatment villages. From this pool of non-SHOUHARDO III villages, the team selected 60 comparison villages that had similar stunting rates to those estimated for the 60 treatment villages.

To account for any COVID-19-related impacts on sampled villages and households, the research team conducted a survey with each village head to understand how COVID-19 affected their village. Based on this survey, 12 villages (six matched pairs) were dropped from the sample because they had extremely high impacts or extremely low impacts from COVID-19. This prevented the analysis from comparing villages that had large COVID-19 impacts to villages that were either not impacted or had few COVID-19 impacts. This process left 108 total villages, 54 treatment and 54 comparison villages.

Prior to the second stage of sampling, the research team conducted a household listing to create a complete and updated list of households in all selected treatment and comparison villages, so that the sampled households would represent the total population. During the household listing, the team collected basic descriptive information, including the number of household members and number of children under five for each household.

In the second stage of sampling, the research team used this household list to randomly select households from the 54 treatment and 54 comparison villages to include in the final sample. In each selected village in the treatment and comparison groups, twenty households were selected from households with children under five years of age. Another 11 households were randomly selected from all listed households without children under five years of age. The final treatment and comparison samples consisted of 1,674 households each (1674 in SHOUHARDO III villages and 1674 in comparison villages). Because the responding households were randomly selected from a list of all households in a community, this should be considered a representative sample of all households in both the sampled treatment and comparison communities including both PEP and non-PEP households, households targeted by the SHOUHARDO III programming, and households that did not receive programming.

To assess the similarity of key characteristics between the comparison and treatment sample, the research team conducted balance tests shown in Table 2.2. For comparison on baseline characteristics, only child stunting rates were compared between the treatment and comparison samples. The remaining measures compare endline characteristics between the treatment and comparison samples using data from the household survey.

**Table 2.2: Balance Table for Treatment and Comparison Villages**

| Variable   | Treatment Village Mean [SE] | Comparison Village Mean [SE] | T-statistic for Difference Between Groups |
|--|-----------------------------|------------------------------|---|
| Children Stunted at Baseline <sup>16</sup>   | 0.461<br>[0.013]            | 0.46<br>[0.012]              | 0.001                                     |
| HH Head is Female  | 0.101<br>[0.008]            | 0.098<br>[0.012]             | -0.003                                    |
| HH Head is Muslim  | 0.943<br>[0.021]            | 0.919<br>[0.027]             | -0.023                                    |
| HH Head Level of Education   | 1.834<br>[0.033]            | 1.806<br>[0.035]             | -0.028                                    |
| HH Size  | 4.535<br>[0.102]            | 4.5<br>[0.090]               | -0.035                                    |
| Years of Education Among Women   | 6.03<br>[0.214]             | 6.528<br>[0.214]             | 0.498                                     |
| Total per capita per day consumption (2021 BD Taka) at Endline   | 104.784<br>[2.177]          | 111.405<br>[2.147]           | 9.664***                                  |
| Daily housing per capita consumption (2021 BD Taka) at Endline   | 12.237<br>[1.124]           | 14.784<br>[1.179]            | 2.547                                     |
| Daily per capita non-food consumption (2021 BD Taka) at Endline  | 29.708<br>[0.782]           | 31.246<br>[0.757]            | 1.537                                     |
| Daily per capita food consumption (2021 BD Taka) at Endline  | 51.706<br>[0.677]           | 53.135<br>[0.695]            | 1.429                                     |
| HH living below US\$ 1.90/day poverty line at Endline <sup>17</sup>  | 0.349<br>[0.022]            | 0.279<br>[0.020]             | -0.071**                                  |
| Poverty Gap: difference between per capita poverty line (based on \$1.90 pov line) and daily per capita consumption at Endline | 6.235<br>[0.573]            | 4.637<br>[0.489]             | -1.598**                                  |

\*\*\*, \*\*, and \* indicate significance at the 1, 5, and 10 percent critical level. Standard errors clustered by village for all individual- and household-level data.

The matching method used in this study constructs comparison villages that are likely to be more comparable to the treatment villages than if the research team randomly selected comparison villages; nonetheless, treatment and comparison villages might still exhibit differences along

<sup>16</sup> This stunting rate is the predicted stunting rates in the treatment and comparison villages from the 2014 DHS data. These values may differ from the baseline stunting rates due to the differences in the ways they were calculated and collected.

<sup>17</sup> It is possible that these were impacted by the treatment, but these indicators tend to be broader and slower-moving impacts that results from intermediate impacts on other dimensions. We don't see many of those intermediate impacts that are large enough and in thematic areas that likely led to improvements in poverty.

important baseline conditions. Findings from the balance tests (above) show that the constructed treatment group and comparison group led to subsamples that exhibited very similar baseline child stunting rates (as estimated via the matching method). In addition to similar child stunting rates, the balance tests show that there are no meaningful differences between the treatment and comparison areas in terms of household demographics at endline (note that these characteristics are unlikely to have changed due to the program). The majority of household heads in both treatment and comparison areas identified as Muslim and Bengali, were male, and had little to no (formal) education. Household sizes were also similar between the two groups with around 2 adult women and 2 adult men in each household.

#### *Dealing with Lack of Balance on Some Indicators*

Balance tests on household consumption and poverty show lower consumption and higher poverty rates in the SHOUHARDO III treatment areas than in the comparison areas. Because these measures were only collected at endline, it is impossible to tell whether these reflect differences in baseline conditions or are themselves program impacts. However, given the above-mentioned criteria, which SHOUHARDO III used to select intervention communities, it is possible that these differences could reflect a lack of balance on consumption and poverty rates, which could also have been present at baseline. To address this, in the analysis of the Research Questions below, the research team uses multiple approaches to account for these potential differences between the treatment and comparison villages. These approaches include re-matching treatment and comparison pairs on the basis of the survey data, as well as controlling for household consumption and poverty directly in the analysis. Irrespective of which approach the team utilized, the main results remained consistent.

#### **PRE-POST EVALUATION SAMPLE SELECTION OVERVIEW**

Two separate research teams collected data for the pre-post evaluation: The ICF research team collected the baseline data in 2016 while the ERIE research team collected the endline data in 2021. Because identifiable data was not available for households surveyed at baseline, the ERIE research team selected new households for the endline survey from a subset of the same villages sampled in the baseline survey. In other words, different households were sampled for the baseline and endline surveys, but the endline survey took place in a sub-sample of the same villages surveyed at baseline.

For the baseline survey, the ICF research team used a multi-stage clustered sampling approach to provide a statistically representative sample of the SHOUHARDO III project target areas. In the first sampling stage, ICF randomly selected 86 villages from the SHOUHARDO III project areas. The ICF research team then systematically sampled 35 households in each of these villages from ICF household listing data collected before the start of survey data collection. Out of those 35 households, 15 received only a household survey, 7 received both a child survey and a household survey, and 13 received only a child survey for a total of 20 child surveys and 22 household surveys. The details of ICF's sampling approach can be found in Appendix D.

The ERIE research team used the baseline stunting rates within the treatment and comparison villages to determine the sample size needed to make both reliable pre-post and impact evaluation comparisons at endline. This sample size was 54 villages each in the treatment and comparison areas, with 20 child surveys per village and 22 household surveys per village. While the number of villages is smaller than the baseline sample, it still provided a statistically representative sample due to having more information to determine the correct sample size for the project. The team used the same survey data from the households surveyed in SHOUHARDO III villages for the treatment group of the impact evaluation and for the endline group of the pre-post evaluation. As described above in section 5.1.2.1, the ERIE research team used a multi-stage sampling approach. First the team randomly selected 60 villages from the villages sampled by ICF at baseline, then randomly selected 31 households per village using the ERIE household listing data. Out of the 31 households, 11 were

chosen from households with no children under five years of age. They received only a household survey. Twenty were chosen from households with children under five years of age. Of these 20, 11 received both a household and child survey, and 9 received only a child survey. This results in a total of 22 household surveys and 20 child surveys (the same number as the baseline survey).

Data Management Aid, a data collection firm, administered the household survey to all relevant household members in the selected households in the treatment area, while they surveyed only one representative for each module in the selected households in the comparison area (although all U5 children in selected households were surveyed and weighed in both the treatment and comparison villages).

#### QUALITATIVE SAMPLE SELECTION OVERVIEW

The qualitative sample for the SHOUHARDO III program was a purposively selected subset of six (6) of the SHOUHARDO III villages that were selected for the endline/impact survey sample. To attain balanced coverage in relation to the SHOUHARDO III intervention area, the research team chose one village from each of six (6) districts where the program occurred—three (3) from char areas and three (3) from haor areas. Criteria for selection included villages that had at least 46 households, where SHOUHARDO III had implemented most of their interventions, and where implementation and community engagement were viewed to be among the strongest based on implementer input and documentation. The research team also maximized ethnic diversity when possible. If necessary, travel, logistics and ease of access had to be considered.

This selection strategy accounts for the fact that if an intervention is not fully implemented or implemented well, it has a reduced chance of being successful in meeting its goals. Therefore, evaluating interventions that have not been well-implemented will primarily identify failures linked to implementation. Instead, by looking at the villages where the intervention was best implemented, the qualitative evaluation's design aimed to capture the potential of the interventions and any lessons regarding maintaining and building on successes in the years to come. We refer to these selected villages as best-case scenario villages.

To select villages for the qualitative study, the research team implemented a multi-stage process described in the steps below.

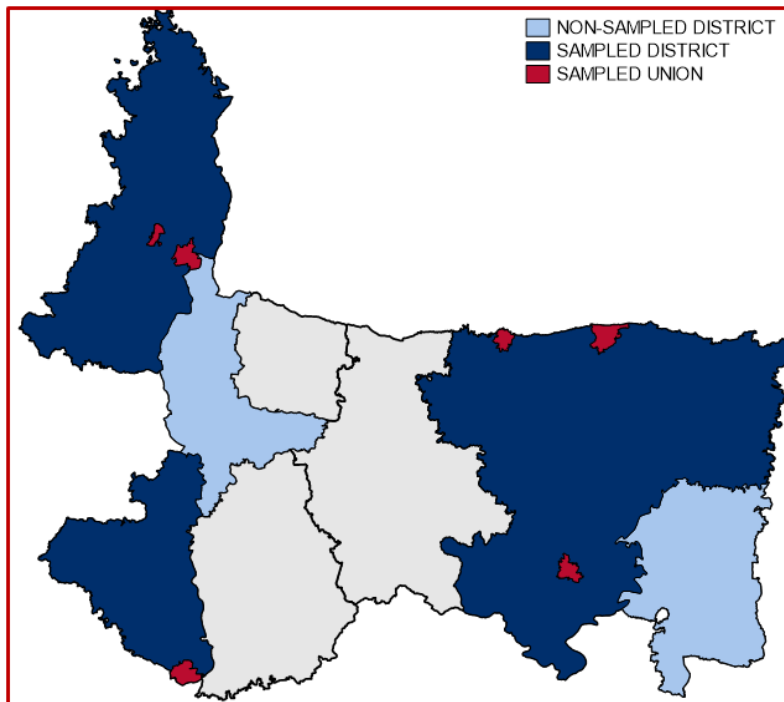
1. District-level: CARE and partners implemented SHOUHARDO III in two contiguous groups of four districts each. The research team selected three of the four districts per group for a total sample of six districts: Gaibandha, Kishoreganj, Kurigram, Netrakona, Sirajganj, and Sunamganj.
2. Upazila and union-level: Within each sampled district, the team selected one upazila, and within each upazila the team selected one union where SHOUHARDO III had implemented most or all of their interventions. This resulted in a sample of six unions.
3. Village-level: The implementers of SHOUHARDO III provided a list of villages in each sampled union where they considered implementation to have been the strongest, the communities engaged, and where there were at least 46 households with project participants. The research team selected one of these villages per union, or six similar villages. In some cases, the team identified two possible unions and villages that met the above criteria, knowing that difficulty of access might impact the final village selection.

The final sample of unions included Chandipur, Engura, Mohangang, Omarpur, Singpur, and Uttar Sreepur. Village names are not included to maintain the confidentiality of respondents. The selected districts and unions are shown in Figure 2.3 below.



Figure 2.3: Locations of Sampled SHOUHARDO III Districts and Unions

**Bangladesh, Char and Haor Areas**



Within each selected village, the team conducted six key informant interviews (KIIs)—two with community leaders and four with members of resilient households—as well as six focus groups with project participants. For each village the team also conducted KIIs with three local input and service providers who served that village. In each district the team interviewed one implementing partner staff member who worked on SHOUHARDO III, selecting when possible, those who were most involved with implementation, most knowledgeable about SHOUHARDO III, and had sustained contact with SHOUHARDO III villages since the conclusion of SHOUHARDO III activities. Finally, in each district the team interviewed a collaborator; funder; or stakeholder in the private sector, government, NGO community or research community who was knowledgeable about SHOUHARDO III or similar programs. Table 2.3 summarizes the interviews and focus groups conducted as well as the selection criteria used.

**Table 2.3: Interviews and Focus Groups Conducted and Respondent Selection Criteria**

| <b>Respondent and Data Collection Type</b>  | <b>Number of Interviews</b>   | <b>Respondent Selection Criteria</b>   |
|---|---|--|
| Participant Focus Groups                    | Six (6) focus groups per village (eight to 12 people per group)<br><br>Total of 36 FGDs | Within each selected village, the team conducted six (6) focus group discussions (FGDs): <ul style="list-style-type: none"> <li>● One-two (1-2) FGDs with men who participated in at least one SHOUHARDO III intervention</li> <li>● Two-three (2-3) FGDs with women who participated in at least one SHOUHARDO III intervention</li> <li>● One (1) FGD with extremely poor and/or vulnerable community members who participated in at least one SHOUHARDO III intervention.</li> <li>● One (1) FGD among youth who participated in at least one SHOUHARDO III intervention. Youth must be at least 18 years of age.</li> </ul>  |
| Resilient Household Member Interviews       | Four KIIs per village<br><br>Total of 24 KIIs   | In each village, the team conducted interviews with four (4) members of the most resilient households. These households were identified through implementing partners and village leaders. The criteria for resilient households were that they: (1) were households within the village; (2) had participated in SHOUHARDO III; (3) had food throughout most of the year; (4) had diversified income sources; and (5) were able to recover in the event of a shock. If perspectives were different enough, more than one interview could be conducted with members of the same household. Or, if the situation required more information, one key informant interview could be conducted with more than one member of a household. The data collection firm conducted at least one interview of the four in each village with a woman and at least one with a man. |
| Community Leader Interviews                 | Two (2) KIIs per village<br><br>Total of 12 KIIs  | In each village, the team conducted two (2) interviews with community leaders who were involved with and knowledgeable about the implementation of SHOUHARDO III activities and the villages in which the activities were implemented. The team sought participants who could provide perspectives regarding other programs that had occurred in the villages as well, and the team included female leaders if possible.   |
| Local Input and Service Provider Interviews | Three (3) KIIs with LSPs that serve each village<br><br>Total of 18 KIIs                | The team conducted interviews with three (3) local service providers (LSPs) who served each selected village. The team tried to interview at least one woman and one man serving each village and tried to include providers of different services and inputs.   |
| Implementing Partner Interviews             | Total of six (6) KIIs   | The team conducted interviews with six (6) implementing partner staff members who each served at least one of the selected villages. The team tried to identify staff who had served in separate geographic locations. Criteria for selection included level of participation in and knowledge about SHOUHARDO III, as well as work in and sustained contact with the selected villages. The team tried to interview staff who worked on different types of interventions and included a mix of men and women.   |

| <b>Respondent and Data Collection Type</b> | <b>Number of Interviews</b> | <b>Respondent Selection Criteria</b>   |
|--|-----------------------------|--|
| Stakeholder Interviews                     | Total of six (6) KIs        | The team conducted six (6) interviews with collaborators, funders, or stakeholders in the private sector, government, community organizations, NGOs, and/or research organizations who were knowledgeable about SHOUHARDO III or similar programs, who did work similar to SHOUHARDO III's, who had a stake in the outcome of SHOUHARDO III, or who could offer a broad perspective on the context of the project implementation. The team identified stakeholders who also knew about the geographic locations where CARE and CARE's partners implemented SHOUHARDO III. The team interviewed people with a variety of perspectives, including local, national and international, and a mix of men and women. |
| Grand Total                                |                             | 66 interviews and 36 focus groups  |

## LIMITATIONS

### COVID-19 DELAYS

Due to lockdowns associated with COVID-19's rapid spread around the world, the team, in consultation with USAID, delayed the endline until December 2021. The lockdowns also delayed or halted some of the project's activities.

This data collection delay impacted the research in several ways. First, the research team did not conduct the endline at the same time of year as the baseline, which means the households could have been facing a different situation in December compared to May in terms of harvests, weather, schooling, etc. While this could have an impact on the pre-post indicators, it won't have an impact on the contrast between treatment and comparison households because both sets of households were surveyed at the same time at endline. Second, COVID-19 may have lessened the impact of the project during the two-year delay through the disruption of activities and thus some results might have diminished. Third, the US-based researchers were unable to travel to Bangladesh to collaborate with the data collection firm on training and quality control. The team addressed this limitation in two ways. First, the US-based team adopted a training of trainers approach, in which the US-based team trained key personnel at the data collection firm over three days. Second, the evaluation team shifted travel budget funds to engage locally based external consultants who served as experts in the various sectors that SHOUHARDO III addressed, such as nutrition and resilience. These consultants participated in the training activities and traveled to the field to observe the data collection activities. Based on these interventions, the team felt satisfied that the data collected was of high quality.

### FIELD WORK ISSUES

During the quantitative endline survey, approximately 19% of the originally sampled households could not be interviewed. This was mainly due to the timing of the survey, which fell within a school holiday period, so more households than normal were away from home. However, the same percentage of households in both the treatment and comparison areas were unavailable for the survey (19.4% in the treatment villages and 19.1% in the comparison villages). Preemptively the survey team over-sampled the households for each group of survey respondents (households without children and households with under five children). From this randomly sampled list of households, households that were away from home were replaced with ordered randomly sampled households ensuring randomization. Given that the same percentage of households were away in the comparison and treatment villages, the research team is confident that this non-response is not

correlated with treatment status, which would introduce bias into the sample for the impact evaluation. Therefore, this non-response should have no effect on the analysis between the treatment and comparison areas. However, this could potentially affect the pre-post comparisons. Because we have no data on the sampled households that could not be interviewed, we are unable to predict if this biased the estimates upwards or downwards for the pre-post analyses, which is another limitation of the pre-post method in this case.

### **MATCHING LIMITATIONS**

Due to the retrospective nature of this evaluation, the identification of the comparison villages faces certain limitations. Ideally, both the implementer and USAID should agree on a methodology to track improvements in child malnutrition from the start of the program. In order to get the most accurate measurement of impact, a control group would be identified at baseline, which did not happen for this project. The alternative way to measure the causal impact (which would not be captured in a pre-post evaluation) is by matching villages retrospectively based on available data collected before the program began. In this matching design, researchers matched on estimated baseline child stunting rate at baselines. Since this is done retrospectively and focused on child stunting rates, other indicators from comparison villages might not be as comparable across other indicators. In this evaluation, SHOUHARDO III treatment villages show lower consumption and higher poverty rates than in the comparison areas. Given that these are measures collected at endline and not available at baseline, it is not possible to know whether or not these villages were different at baseline, only that they are different at endline. Due to the differences, in the impact evaluation analysis, the research team both re-matched treatment and comparison villages on the basis of the survey data and controlled for household consumption and poverty in the analysis. Regardless of which analysis method ERIE used to control for these differences, the main results stayed consistent throughout the impact evaluation. Such consistency in the analysis gives the research team confidence in the accuracy of the results; however, we cannot say with absolute certainty that these analytical adjustments have eliminated all confounding differences, measured or unmeasured, between treatment and comparison villages.

## **3. FINDINGS**

### **INTRODUCTION TO FINDINGS**

The findings section of this report provides responses to five (5) research questions. As described in the methodology section, we explore these questions using quantitative data from a large sample of treatment villages collected at baseline, quantitative data from a sub-sample of those treatment villages collected at endline, quantitative data from a random sample of matched comparison villages, and qualitative data collected from six purposively selected villages where SHOUHARDO III was well-implemented and the community was engaged. Together, these data sources help us create a picture of how the SHOUHARDO III communities changed over the course of the project. Findings that take baseline and endline data of treated villages to create a pre-post quantitative evaluation help describe how community qualities (such as nutritional status or resilience capacities) have changed in the communities since the activities began. Evidence from the qualitative evaluation in “best case scenario” villages draws attention to the program strategies that might have been the most influential in improving the program’s targeted outcomes. The quantitative impact evaluation, which compares treated and matched, non-treated villages, demonstrates how the program’s targeted outcomes in treated villages differ from those who never benefited from the program. This final analysis helps differentiate the effects of SHOUHARDO III from broader changes that happened across the region.

## RESEARCH QUESTION I FINDINGS: TO WHAT EXTENT HAS SHOUHARDO III MET ITS DEFINED GOAL, PURPOSES AND OUTCOMES?

### 1.1.1 OVERVIEW OF RESEARCH QUESTION I

The goal of the SHOUHARDO III project was to improve gender-equitable food and nutrition security and resilience among vulnerable people living in the char and haor of Bangladesh. CARE designed their project around five purposes (or strategies) and a series of sub-purposes and outcomes, the accomplishment of which would lead to the achievement of the overall goal. (See SHOUHARDO III's theory of change in Annex C for a detailed look at their theory of how their goal, purposes and outcomes would be met.) The purposes are as follows:

1. Increased equitable access to income for both women and men, and nutritious food for men, women, boys and girls;
2. Improved nutritional status of children under five years of age, pregnant and lactating women and adolescent girls;
3. Strengthened gender equitable ability of people, households, communities, and systems to mitigate, adapt, and recover from natural shocks;
4. Increased women's empowerment and gender equity at family and community level; and
5. Increased provision and utilization of public services for communities, especially for poor and extreme poor (PEP) women.

In the next section, the research team shares high-level key findings regarding whether SHOUHARDO III met its five purposes. In the sections that follow, the research team provides more detail regarding the extent to which SHOUHARDO III achieved these purposes and the pathways by which these achievements occurred. These findings also show the potential of these interventions and lessons for future implementation.

### 1.1.2 SUMMARY OF RESEARCH QUESTION I FINDINGS AND KEY TAKEAWAYS

The key findings from our pre-post and qualitative performance evaluations suggest that each of SHOUHARDO III's five main strategies (purposes), contributed to varying extents to the program achieving its goal in the treatment villages. However, overall, the impact evaluation suggests that we are limited in being able to attribute most of these differences directly to the SHOUHARDO III program. An overview of these findings can be found in Table 3.1. Figure 3.1 shows the success or lack of success of each of the project's purposes and sub-purposes in achieving SHOUHARDO III's goal in best-case scenario villages.

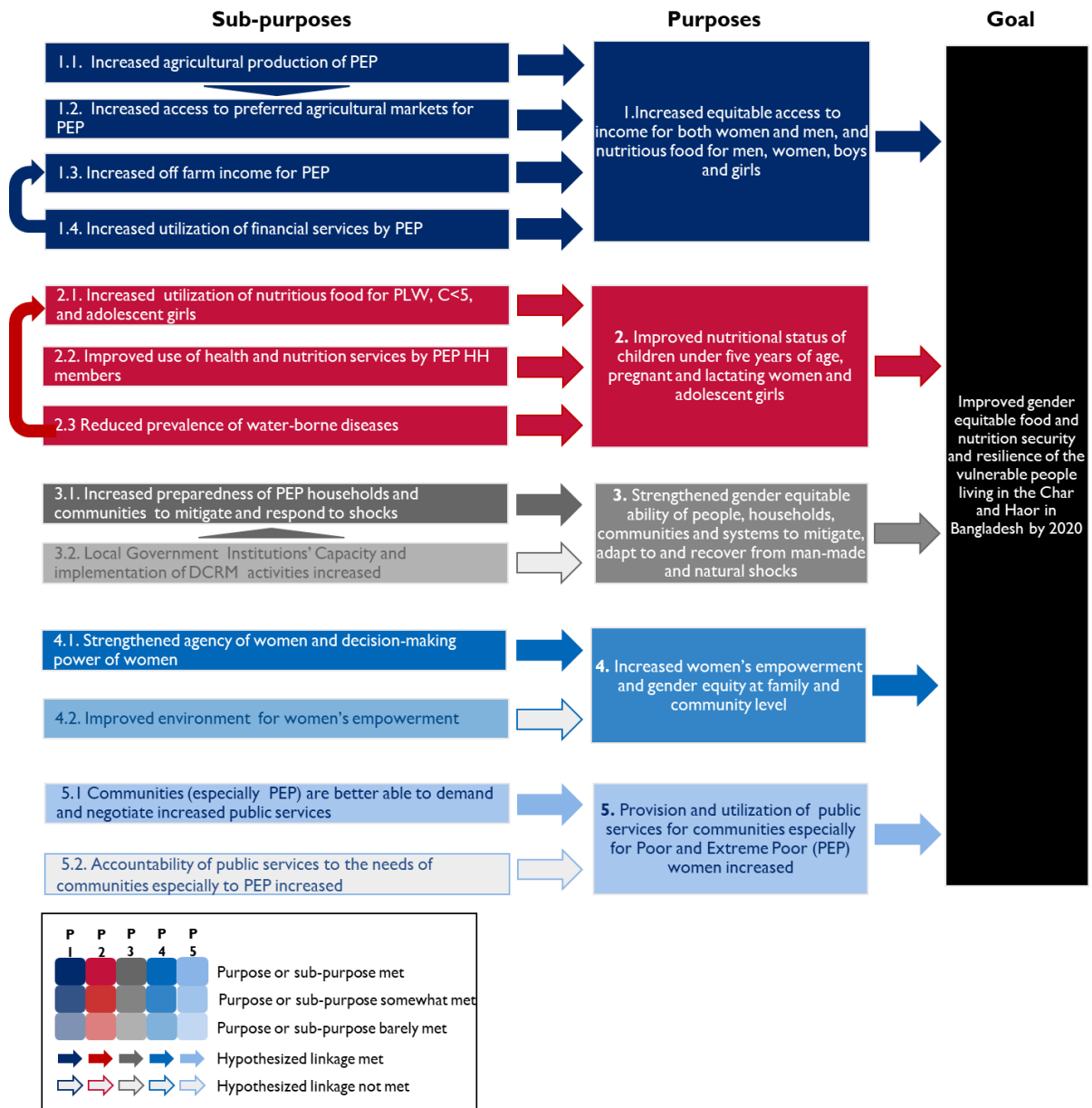
**Table 3.1: Key Findings on the Extent to Which SHOUHARDO III Met its Defined Purposes (RQ1)**

| Purpose   | Key Findings from the Qualitative and Quantitative Research   |
|---|---|
| <b>Purpose I:</b> Increased equitable access to income for both women and men, and nutritious food for men, women, boys and girls | <ul style="list-style-type: none"> <li>• According to the <b>pre-post analysis</b>, households reported improvements in poverty (as a proxy for income) at the end of the program.</li> <li>• According to the <b>pre-post and qualitative analysis</b>, the program was able to contribute to increased incomes through increased agricultural production, increased access to agricultural markets and crop prices, increased off-farm income, and increased access to financial services. <ul style="list-style-type: none"> <li>○ The program increased production primarily through increased agricultural diversity at the household level (as shown by the <b>pre-post and qualitative analysis</b>), increased access to quality inputs (as shown by the <b>qualitative analysis</b>), and increased adoption and use of agricultural technology and management practices (as shown by the <b>pre-post and qualitative analysis</b>). In best-case-scenario villages, participants reported increased crop production and product diversification and cited that they not only were able</li> </ul> </li> </ul> |

| Purpose   | Key Findings from the Qualitative and Quantitative Research  |
|---|--|
|   | <p>to fulfill their household’s nutritional needs but also could earn additional income by selling excess produce from crops and livestock.</p> <ul style="list-style-type: none"> <li>○ The <b>qualitative analysis</b> showed that improved access to agricultural markets was through more accessible market information and strengthened market linkages. Participants also reported higher price sales of products and credited it to improved market linkages as well as improved quality and quantity of produce via SHOUHARDO III training.</li> <li>○ After SHOUHARDO III trainings in off-farm income generating activities (IGAs) and provision of some necessary inputs for those IGAs, more men and women were earning money from off-farm activities, according to the <b>qualitative analysis</b>.</li> <li>○ According to the <b>pre-post</b> and <b>qualitative analysis</b>, most participants were able to access loans from VSLAs, with few accessing loans from formal financial institutions.</li> </ul>   |
| <p><b>Purpose 2:</b> Improved nutritional status of children under five years of age, pregnant and lactating women and adolescent girls</p> | <ul style="list-style-type: none"> <li>● The <b>pre-post analysis</b> indicated that women’s nutritional status improved after the program.</li> <li>● Although the <b>pre-post analysis</b> showed that children’s nutritional status improved after the program, the <b>impact analysis</b> indicated that we cannot confidently attribute this improvement to the program.</li> <li>● The <b>pre-post and impact analysis</b> suggest that the program did have some effect on the sub-purposes (or intermediary outcomes) to achieving improved nutritional status among women and children. The <b>qualitative analysis</b> elucidated how these sub-purposes were achieved. <ul style="list-style-type: none"> <li>○ The <b>pre-post analysis</b> indicated that dietary diversity among women increased, and the <b>impact analysis</b> showed that we can attribute this improvement to the program. The <b>qualitative analysis</b> revealed that increased knowledge, improved access to nutritious foods through cash and in-kind transfers, and increased food and livestock cultivation led to the achievement of this outcome.</li> <li>○ The <b>pre-post analysis</b> revealed that children exclusively breastfeeding (for the first 6 months) and receiving a minimum acceptable diet (dietary diversity and feeding frequency) increased. The <b>impact evaluation suggests</b> that only improvements in the consumption of minimum acceptable diets may have been due to the program.</li> <li>○ Participants saw improved use of health and nutrition services from increased access to government primary health care and antenatal care services and providers (as shown by the pre-post and qualitative analyses) and knowledge of services offered (as shown by the qualitative analysis). The <b>impact analysis</b> suggests that this improvement in antenatal care was due to the program.</li> <li>○ Although the <b>pre-post analysis</b> showed a decline in diarrhea among children, the <b>impact analysis</b> is unable to attribute this to the program. The <b>pre-post</b> and <b>qualitative analysis</b> showed improvements in the use of clean water sources and sanitary latrines. However, <b>pre-post findings</b> only indicate a minimal increase in water treatment technologies and a decline in accessing both improved and unimproved water within a 30-minute round trip.</li> </ul> </li> </ul> |

| Purpose  | Key Findings from the Qualitative and Quantitative Research  |
|--|--|
| <p><b>Purpose 3:</b> Strengthened gender equitable ability of people, households, communities and systems to mitigate, adapt to and recover from man-made and natural shocks</p> | <p><b>According to the impact evaluation:</b></p> <ul style="list-style-type: none"> <li>Households in SHOUHARDO III villages that experienced major shocks were better able to mitigate the effects of the shocks—maintaining their food consumption—than households in comparison villages that also experienced major shocks.</li> <li>Households were also better able to recover from shocks through access to agricultural extension services and adoption of sustainable agricultural and storage practices</li> </ul> <p><b>According to qualitative analysis in best-case scenario villages:</b></p> <ul style="list-style-type: none"> <li>SHOUHARDO III increased disaster awareness, preparedness, and access to services at the household and the community level, but the results of capacity building at the union level were more mixed.</li> </ul>  |
| <p><b>Purpose 4:</b><br/>Increased women’s empowerment and gender equity at family and community level</p>   | <ul style="list-style-type: none"> <li>The <b>pre-post analysis</b> showed improvements in women’s mobility and decision-making; however, the <b>impact analysis</b> shows mixed results. Younger women have slightly lower shares seeking permission compared to comparison villages – indicating higher mobility and decision-making –, but this is offset by a higher share among older women who seek permission.</li> <li>The <b>pre-post analysis</b> indicated more equitable household relationships after the program, with the <b>qualitative analysis</b> showing this increased women’s empowerment and gender equity.</li> <li>Although the <b>qualitative analysis</b> revealed that women’s involvement in income generating activities and agricultural activities empowered them, the <b>pre-post analysis</b> showed limited improvements in women’s contributions to household income.</li> <li><b>Pre-post evaluation findings</b> showed only slight improvements in child marriage and early pregnancy, and the <b>impact evaluation</b> results show no meaningful differences in the age of women at marriage or first pregnancy between treatment and comparison villages. <b>Qualitative findings</b> in best-case-scenario villages suggested that the incidence of domestic violence and sexual harassment may have declined.</li> </ul> |
| <p><b>Purpose 5:</b> Provision and utilization of public services for communities especially for Poor and Extreme Poor (PEP) women increased</p>                                 | <p><b>According to qualitative analysis in best-case scenario villages:</b></p> <ul style="list-style-type: none"> <li>SHOUHARDO III strengthened communities’ ability to advocate for and demand social services and resources, particularly through community groups, resulting in the adoption of community priorities by union parishads in decision-making.</li> <li>SHOUHARDO III’s efforts to strengthen the accountability of union parishads (UP) appeared to have limited results, and very few participants reported that the specific needs of poor and extremely poor (PEP) women were prioritized.</li> </ul>  |
| <p><b>Summary of findings across purposes</b></p>  | <ul style="list-style-type: none"> <li>The qualitative study of communities where SHOUHARDO III was well-implemented provides promising evidence that the project succeeded in promoting multi-sectoral change at <i>household and the community levels</i>. However, there is more limited evidence that the project was similarly successful in achieving the sub-purposes focused on improving disaster management, gender empowerment, or governance within higher levels of government or at the systemic level (Figure RQ 1.1).</li> </ul>   |

Figure 3.1: The Extent to Which Sub-Purposes and Purposes Met the Overall SHOUHARDO III Goal (RQ1)



Below we break-down SHOUHARDO III's theory of change and look at how, whether, and to what extent the project met its goal through each purpose, its sub-purposes and outcomes.

### 1.1.3 DETAILED FINDINGS OF PURPOSE I: INCREASED EQUITABLE ACCESS TO INCOME FOR BOTH WOMEN AND MEN, AND NUTRITIOUS FOOD FOR MEN, WOMEN, BOYS AND GIRLS

#### OVERVIEW OF PURPOSE I FINDINGS

The first strategy (Purpose 1) SHOUHARDO III used to achieve their goal of improved gender-equitable food security, nutrition, and resilience among vulnerable people in the char and haor regions of Bangladesh was through increased equitable access to income for both women and men, and nutritious food for men, women, boys and girls. In this section, we first look broadly at how the income of households in SHOUHARDO III villages changed using pre-post findings. Next, we look closely at the extent to which CARE achieved each sub-purpose (using both pre-post findings and qualitative data) and the extent to which participants perceived that each of these sub-purposes



influenced SHOUHARDO III's Purpose I goal of improved equitable access to income and nutritious food (using qualitative data). No impact evaluation data pertains to this section.

Overall, SHOUHARDO III villages saw improvements in poverty, based on positive results from all three pre-post indicators (which all used poverty as a proxy for income), although the number of men and women earning cash appeared to have declined. When exploring each Sub-Purpose, we observe the following conclusions as noted in Table 3.2.

**Table 3.2: Key Findings on the Extent to Which Sub-Purpose Pathways Produced Positive Outcomes (RQ1.1)**

| Sub-Purpose   | Key Findings from the Qualitative and Quantitative Research  |
|---|--|
| <p><b>Sub-Purpose 1.1:</b> Increased Agricultural Production of PEP</p>                                     | <ul style="list-style-type: none"> <li>● Pre-post results revealed that crop and livestock diversification efforts had limited effect, as the types of crops cultivated and livestock reared at endline were similar to baseline. However, findings did show an increase in the adoption of sustainable practices for both crop cultivation and livestock rearing, as well as increased access to public agricultural and livestock extension services.</li> <li>● SHOUHARDO III villages also saw an increase in household agricultural production, which participants suggested was primarily due to increased agricultural diversity at the household level, increased access to quality inputs, and increased adoption and use of agricultural technology and management practices.</li> <li>● Best-case scenario villages reported extremely positive results regarding nutritional security and income due to SHOUHARDO III activities. These villages reported increased crop production and product diversification and cited that they not only were able to fulfill their household's nutritional needs but also could earn additional income by selling excess produce from crops and livestock.</li> </ul> |
| <p><b>Sub-Purpose 1.2:</b> Increased Access to Preferred Agricultural Markets for PEP (Female and Male)</p> | <ul style="list-style-type: none"> <li>● Participants from best-case scenario villages reported that improved quality and quantity of crops was at least in part due to cultivating higher-value horticultural crops using agricultural techniques as taught by SHOUHARDO III training. They reported increased access to market information and strengthened market linkages, including the sustained use of wholesalers who they had connected with via SHOUHARDO III.</li> <li>● Participants reported higher price sales of products and credited it to improved market linkages as well as improved quality and quantity of produce via SHOUHARDO III training.</li> </ul>  |
| <p><b>Sub-Purpose 1.3:</b> Increased Off-Farm Income for PEP</p>  | <ul style="list-style-type: none"> <li>● While participants cited increased quality and quantity of crop cultivation and livestock rearing as the main sources of additional income, they also cited that many people are now engaged in off-farm activities due to SHOUHARDO III influence.</li> <li>● Women especially cited how off-farm activities allow them to be more financially independent from their husbands.</li> <li>● Youth participants reported that vocational training oriented to youth led to increased and sustained employment and income. Many participants who attended the training in 2019 reported still working in the industry in which they were trained at the time of their interview at the end of 2021 or early 2022.</li> </ul>  |
| <p><b>Sub-Purpose 1.4:</b> Increased Utilization of Financial Services by PEP (Female and Male)</p>         | <ul style="list-style-type: none"> <li>● In best-case scenario villages, participants reported increased savings due to increased use of financial services alongside improved financial management skills. Participants cited the very popular SHOUHARDO III-established VSLAs as the cause for improved access and skills.</li> <li>● Participants reported that VSLAs are so popular that not only are non-participants in their communities trying to join VSLAs, but that neighboring communities are starting their own VSLAs groups.</li> </ul>   |

| Sub-Purpose | Key Findings from the Qualitative and Quantitative Research  |
|-------------|--|
|             | <ul style="list-style-type: none"> <li data-bbox="635 264 1385 427">● VSLAs were especially important for women as a pathway for increased income generation. Women used the savings, loans, or interest-based profits from VSLAs to invest in alternative livelihood activities. Qualitative data strongly suggests the high potential for these mechanisms to influence female income levels under best-case conditions.</li> <li data-bbox="635 432 1385 568">● Quantitative findings from the pre-post analysis confirmed that across all SHOUHARDO III villages, the use of financial services among farmers increased between baseline and endline. The primary driver of this change was increased access for female farmers, though they still struggle to access credit.</li> </ul> |

### OVERALL ANALYSIS OF INCOME CHANGES IN SHOUHARDO III VILLAGES

The **pre-post analysis** compared measures of poverty (as a proxy for income) for a sample of households in SHOUHARDO III communities who participated in a household survey at baseline to a similar group of households from the same communities who participated in the endline survey in 2021. The difference between these measures can be understood as changes in poverty in these communities that may have been caused by SHOUHARDO III interventions, by broader changes in Bangladesh during that period, or by a combination of the two; a pre-post design does not allow the research team to identify what caused any of the measured changes. Similarly, the perspectives of participants in the **qualitative study** in “best case scenario” communities where SHOUHARDO III implementation was particularly strong provides descriptions of the changes they have experienced since the project began and perspectives on how and why changes occurred. While participants might have attributed changes to SHOUHARDO III, this does not provide definitive causal evidence of its effects. Rather, it highlights possible pathways of change and insights on project implementation, acceptance, and engagement.

**Findings from the pre-post evaluation show improvements in household poverty after 5 years of implementation of the SHOUHARDO III program.** The research team used three different indicators to analyze household poverty: daily per capita expenditures, prevalence of poverty, and mean depth of poverty. Our data show improvements in all three poverty measures. Detailed findings are listed below, and detailed definitions and analysis guidelines for these indicators can be found in Annex F.

#### *Daily Per Capita Expenditures*

As a proxy for income, FFP prefers to use daily per capita expenditures due to the challenges with collecting accurate income information in the field from household respondents. Due to the fact that increased expenditure is closely tied with an increase in income, consumption can be used as a measure of wealth. Daily per capita expenditures are calculated by using a household’s consumption expenditures on food items, non-food items, housing, and assets/durable goods over the previous 12 months and it is expressed in constant 2010 United States dollars to ensure comparability between baseline and endline (for more information on how this is calculated see Annex F). At endline, per capita expenditures for the treatment area was \$2.22. **This is 19 cents higher than baseline where the average household daily per capita expenditure was \$2.03.** The research team saw the greatest improvement in households with only adult females who went from \$1.93 at baseline to \$2.25 at endline (although the sample size is small).

### *Prevalence of Poverty*

Prevalence of poverty is calculated based on the percent of households living on less than \$1.90 a day. In the SHOUHARDO III treatment areas, at baseline 45.7% of households were living below \$1.90/day. **This has decreased at endline where 36.3% of households are living below \$1.90/day. Within this group, households with only adult women decreased as well with 50.3% living below \$1.90/day at baseline and 46.2% at endline.** There are too few adult male only households to draw conclusions for that population.

### *Mean Depth of Poverty*

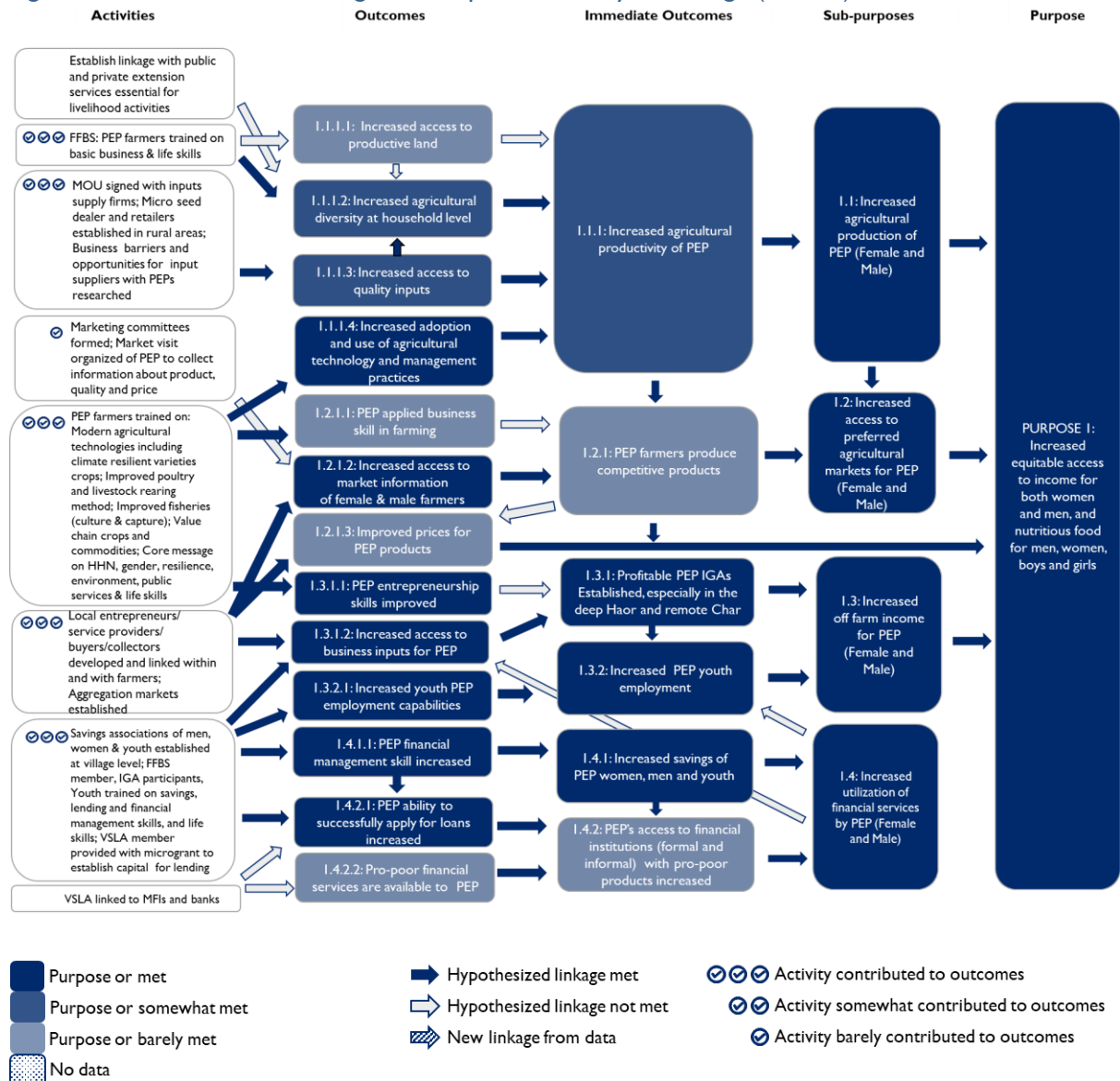
Depth of poverty can be looked at as the per capita cost of increasing a household's daily per capita consumption to the USD \$1.90/day poverty line. **At baseline in the SHOUHARDO III areas, the depth of poverty was 11.1% of the poverty line. At endline, this number is lower at 7.6% of the poverty line.** The 7.6% endline amount means that it would take approximately 14 cents (7.6% of \$1.90) to lift households above the \$1.90 poverty threshold in the treatment areas. A large confidence interval for both adult female and adult male only households makes it challenging to analyze the mean depth of poverty for those households.

**In the next section, findings from our qualitative analysis suggests that in best-case scenario villages, SHOUHARDO III was able to contribute to Purpose I by increasing and diversifying cultivation of nutritious foods, both fulfilling nutritional needs of households and supplementing household income with sales of produce.** There were four main sub-purposes or strategies (of four hypothesized) through which participants reported the project did this: (1) Increased agricultural production of PEP (Sub-Purpose 1.1 below); (2) Increased access to preferred agricultural markets for PEP (Sub-Purpose 1.2); (3) Increased off-farm income for PEP (Sub-Purpose 1.3); and (4) Increased utilization of financial services by PEP (Sub-Purpose 1.4). Figure 3.2 displays the four sub-purposes hypothesized to lead to achieving Purpose I. Below, we provide further detail on the SHOUHARDO III activities that were reported to contribute to achieving these sub-purposes.

#### **SUB-PURPOSE 1.1: INCREASED AGRICULTURAL PRODUCTION OF PEP**

The first pathway to increased equitable access to income and nutritious food was through increased agricultural production by poor and extreme poor participants. Findings from both the pre-post and qualitative evaluations show an increase in household agricultural production after the SHOUHARDO III program. Our qualitative findings indicate that this increase in production was primarily achieved through increased agricultural diversity at the household level, increased access to quality inputs, and increased adoption and use of agricultural technology and management practices, as shown in Figure 3.2. To a lesser degree, participants attributed the increase in household agricultural production to increased access to productive land.

Figure 3.2: Achievements through the Purpose I Theory of Change (RQ 1.1)



**OUTCOME 1.1.1.1: ACCESS TO PRODUCTIVE LAND**

SHOUHARDO III encouraged households to increase cultivation on the land around their homes, thereby increasing their household production. While hypothesized that participants would have increased access to productive land by negotiating favorable terms for sharecropping and leased land, participants did not report changes in access to productive land through these means. Instead, participants who did discuss access to additional land mostly reported that they were now cultivating land that they had previously left uncultivated, increasing their household production as a result.

*“We can cultivate vegetables in our backyard and consume them. It proved very good. We have uncultivated lands in our backyard, but we didn’t cultivate anything on those lands. If we plant fruit trees in our backyard, then we can consume the fruits as well as sell them.” (FFG19\_F1<sup>18</sup>)*

**OUTCOME 1.1.1.2: INCREASE IN AGRICULTURAL DIVERSITY AT HOUSEHOLD LEVEL**

SHOUHARDO III encouraged participants to increase and diversify their cultivated crops and livestock. Findings from our pre-post evaluation show that the crops cultivated and livestock reared

<sup>18</sup> We use respondent codes throughout to protect respondent as well as community confidentiality while indicating the perspectives of the same respondents across the different sections of this report. Codes include information on interview type and sex of the respondent.

at endline were similar to baseline, as shown in Figure 3.3 and Figure 3.4 below. The biggest changes between baseline and endline were seen in a large increase in the popularity of raising chickens and ducks and an increase in the growing of other vegetables.

Figure 3.3: Most Popular Crops Cultivated Raised from Baseline to Endline (RQI.1)

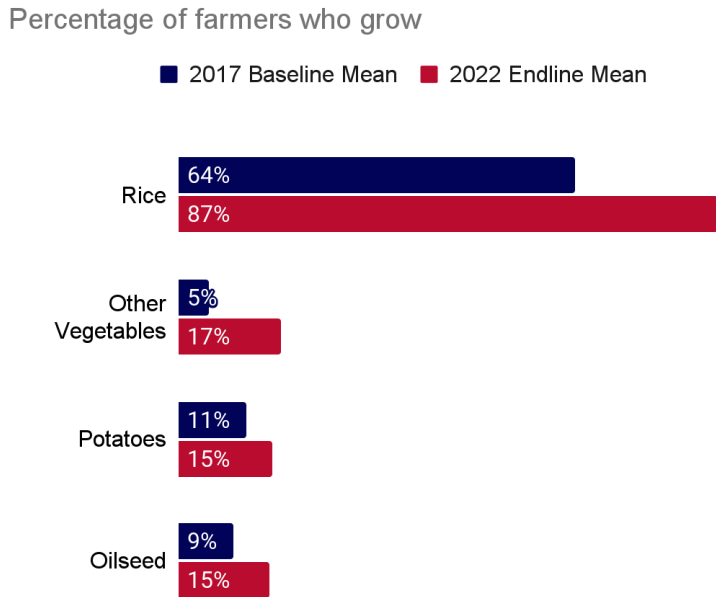
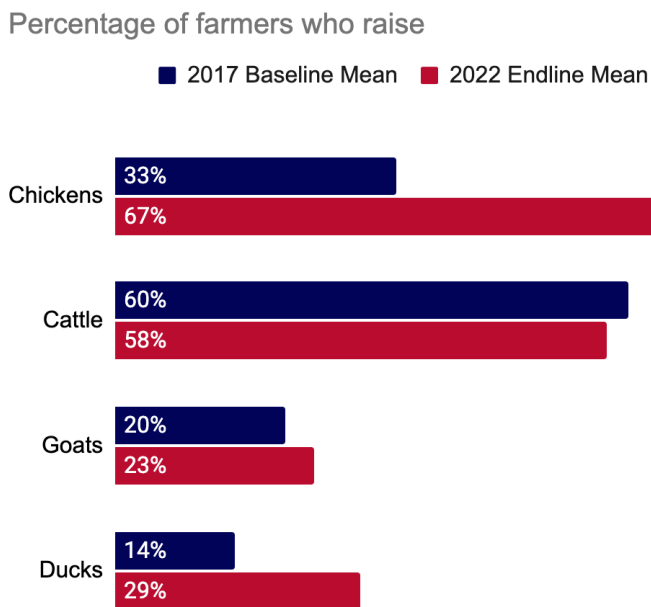


Figure 3.4: Most Popular Livestock Reared at Baseline and Endline (RQI.1)



Although the pre-post analysis showed only modest improvements in crop and livestock production and diversification, the qualitative performance analysis showed widespread diversification and intensification of crop and livestock production in best case scenario villages. **Nearly all participants from qualitative interviews reported that this allowed participants not only to fulfill the entirety of their household's nutritional needs but allow them to sell excess produce from crops and livestock for additional income as well.** Participants reported cultivating new crops that the project introduced to them, including radish, potato, red spinach, corn, beans, nuts, maize, pulses, pumpkin, and gourds. With the combination of cultivation and improved poultry and livestock<sup>19</sup> rearing methods introduced by SHOUHARDO III, participants are growing enough vegetables and collecting eggs from poultry to not only fulfill their household's nutritional needs, but to sell excess crops and eggs for supplemental household income. According to participants, their increased agricultural production has increased their disposable income through reduced expenditures as well. Since they are consuming the crops they grow and collecting eggs from chickens, they no longer need to buy as much from markets. Participants reported that not only are they consuming different kinds of vegetables, but they are able to consume more vegetables and more meals per day. While previously eating only one or two meals a day, participants now reported eating two to three meals per day without limitations on the number of vegetables they consume.

*"We didn't have this much production in the past. We hardly fulfilled the nutritional needs of our body. Now, we sell the remaining vegetables after fulfilling our needs." (FFG6\_F3)*

*"Many changes happened like someone is cultivating vegetables, rearing cows and goats, and chickens and ducks. They are earning from many sources. As a result, their economic status changes a lot. And they learned these from SHOUHARDO. These were not in practice previously." (CL\_M2)*

*"Previously, we cultivated only one kind of vegetable, but now we cultivate red spinach, Malabar spinach, pumpkin, gourd and a variety of vegetables. They are cultivating a variety of vegetables to fulfill their nutritional needs and selling also. Previously, they cultivated only potatoes or pumpkins but now cultivate a variety of vegetables." (FYFG2\_F10)*

#### **OUTCOME I.1.1.3: INCREASED ACCESS TO QUALITY INPUTS**

All qualitative participants interviewed agreed that the quantity and quality of their agricultural production increased thanks to improved access to affordable high-quality seeds from local service providers, including seed agents, established or supported by SHOUHARDO III. Participants reported that they know where to purchase high quality seeds and will continue to do so, having seen the increase in their yields and produce quality as a result of using them. Participants also reported that buying their seeds from local sellers has cut down on their costs. They no longer need to travel as far to find good quality seeds, and since the seeds are high quality and can germinate, they do not need to repurchase seeds as they used to prior to SHOUHARDO III establishing seed agents. Service providers reported that they have continued to keep prices for quality seeds low because they have a good relationship with community members. While the dealers and retailers do not make as much profit as they could, they are selling more seeds now than they were prior to SHOUHARDO III's implementation.

*"Previously, we bought these [seeds] from the markets. Sometimes we got good quality and sometimes not. But now, we take suggestions from the agriculture office before buying the seeds. ... Now we can harvest more than before." (RH\_M5)*

#### **OUTCOME I.1.1.4: ADOPTION AND USE OF TECHNOLOGIES AND MANAGEMENT PRACTICES**

Findings from the pre-post evaluation show an increase in the adoption of sustainable practices. As shown in Figure 3.4, farmers using at least three sustainable practices increased from baseline to

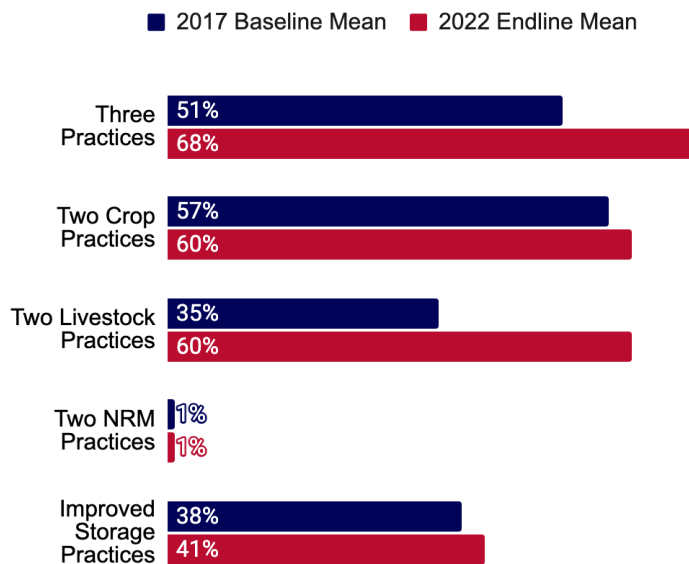
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<sup>19</sup> Including chickens, ducks, goats, and cows

endline. These included crop, livestock, and natural resource management. Compared to baseline, more farmers at endline adopted sustainable livestock and improved storage practices, but few adopted sustainable crop practices and NRM practices (Figure 3.5).

Figure 3.5: Pre-post Analysis - Percentage of Farmers Using Sustainable Agriculture Practices at Baseline and Endline (RQI.1)

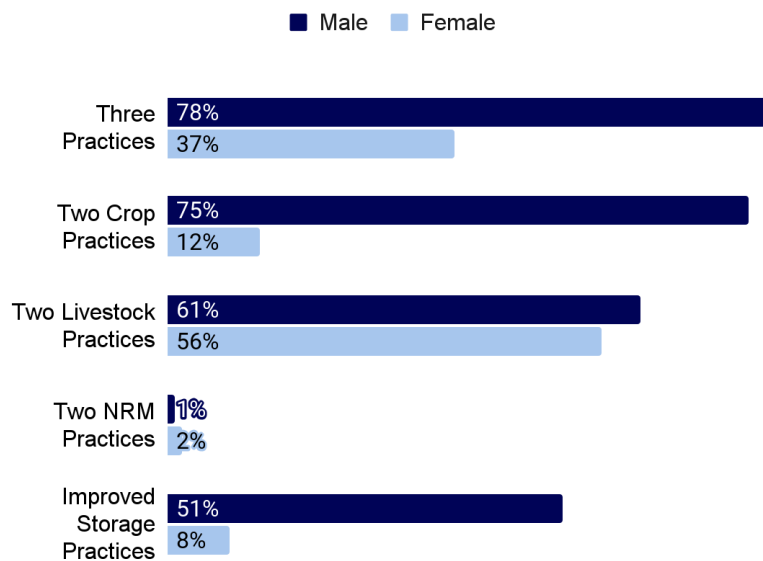
Percentage of farmers using sustainable agriculture



**Despite these improvements, large gender gaps in the adoption of sustainable practices persisted at the end of the program.** These gaps in adoption between male and female farmers were particularly salient for sustainable agricultural and crop practices and improved storage practices, with the share of female farmers adopting these practices on average 41 percentage points lower than male farmers (Figure 3.5). However, female farmers did make improvements in using sustainable livestock practices.

Figure 3.6: Pre-post Analysis - Sustainable Agriculture Practices at Endline by Gender (RQ1.1)

Percentage of farmers using sustainable agriculture at endline



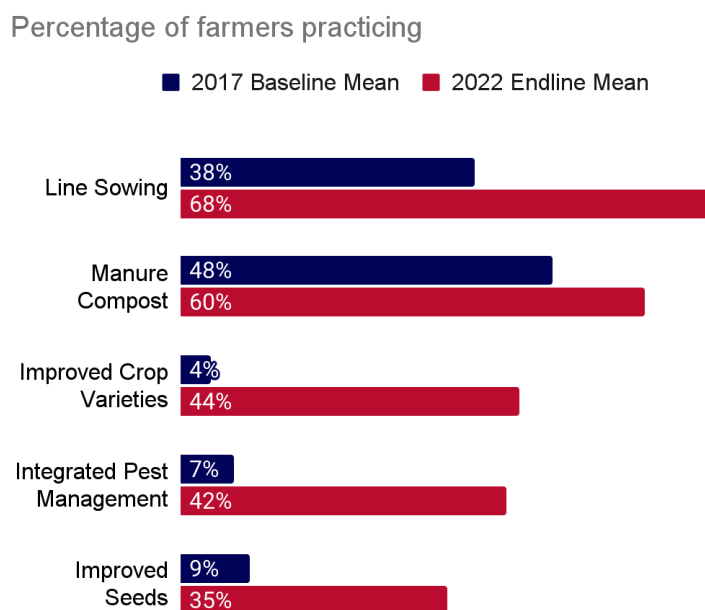
Findings from our **qualitative evaluation** highlight what specific practices were adopted by participants from “best-case scenario” villages, how they improved their access to nutritious foods, and the main facilitators to their adoption. These findings are detailed by crop and livestock practices below.

#### *Improvements in Crop Practices*

**By adopting improved land management and cultivation practices introduced by SHOUHARDO III, participants reported improving the quantity and quality of their harvests.** Participants are now able to cultivate year-round using methods taught by SHOUHARDO III. As shown in Figure 3.7, the most popular sustainable crop practices reported by SHOUHARDO III farmers include line sowing (68.7%), manure compost (60.0%), improved crop varieties (43.7%), integrated pest management (42.0%), and improved seeds (34.5%).



Figure 3.7: Pre-post Analysis - Most popular sustainable crop practices at baseline and endline (RQ1.1)



Qualitative participants explained how these practices supported their harvests. Where previously participants were sowing seeds on top of the soil where they could wash away or fail to germinate, they now reported preparing beds through plowing, preparing and using compost, and planting the proper number of seeds using adequate spacing to ensure the highest productivity for crops. Along with using these beds as a homestead cultivation method, participants also reported being trained in preparing and subsequently using pits and sacks for planting. Pits are holes dug and filled with compost to improve the health of crops and reduce runoff and erosion. Sacks, typically made of plastic, are filled with dirt and compost, and crops are cultivated directly in them. This is especially useful in flood prone areas since the sacks can be moved during flooding to preserve the crops. As crops grow, participants reported using mobile applications and hotline services for agricultural questions related to pest control methods, livestock disease, and the like. Participants reported saving on pesticides by making their own neem leaf spray and using pheromone traps and saving on fertilizer by using manure from livestock and compost from organic kitchen waste, also learned through SHOUHARDO III.

Figure 3.8: A Participant Working in Her Homestead Vegetable Garden Bed (RQ1.1)



*“We sow the seeds of spinach after preparing a bed and sow seeds of pumpkin and gourds in pits. And during the rainy season, we sow the seeds in sacks. If the water level increases, then we shift the sacks to a higher place.” (FFG3\_F4)*

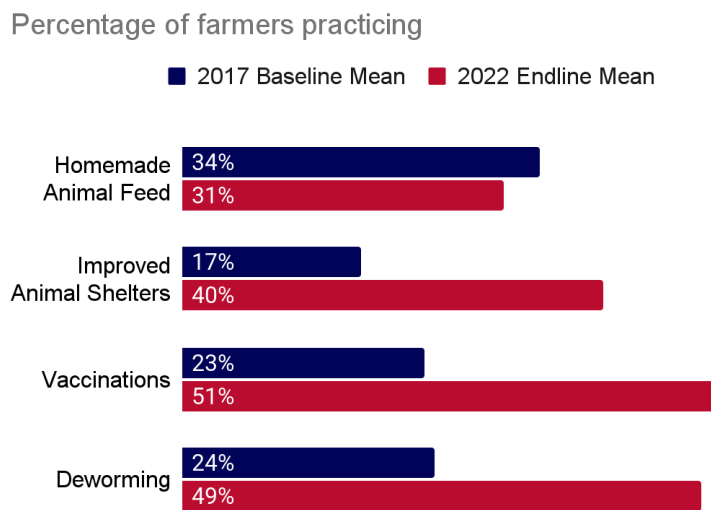
*“Previously, we sowed the seeds anywhere which were washed away during the rain. But now we dig a pit and sow 3-4 seeds there. We sowed many seeds in one place in the past. As a result we didn’t get the expected production. But after the training, we kept the healthy seedlings and uprooted the others. Production has increased.” (FFG2\_F10)*

**Participants in these villages noted that these increased yields from homestead production translated into improved household food security, dietary diversity, and increased supplemental household income.** Most participants reported growing enough to sell surplus harvest for additional income. In addition to their increased yields being enough to meet their household consumption needs, increased yields enabled more consumption of food and more meals within households. In addition to increased production leading directly to increased income, some participants reported spending less household income on purchasing vegetables and fruits.

#### *Improvements in livestock practices*

**Nearly all participants reported improved outcomes for their poultry and livestock due to improvements in rearing practices.** These improved practices included vaccinating their poultry and livestock regularly, using deworming medication, and improving living conditions for poultry and livestock through raised platforms, improved shelters, and better hygiene practices (Figure 3.9).

Figure 3.9: Pre-Post Analysis - Most used sustainable livestock practices at baseline and endline (RQ1.1)



Participants reported that SHOUHARDO III-trained vaccinators, who offered vaccines at discounted rates, were instrumental in ensuring they were able to afford vaccinations for their livestock. In addition to improved health for livestock from widespread vaccinations, participants reported placing more importance on feeding livestock now as compared to the past, including adding supplements and vitamins to their feed, leading to better outcomes for the livestock. Participants also placed more importance on the hygiene of their animals as a result of SHOUHARDO III training, including keeping goats on raised platforms to avoid soil-borne diseases and bathing and washing cows more frequently to reduce sickness and disease.

Figure 3.10: A Raised Shelter for Livestock (RQI.1)



*“Due to vaccination, the death rate of chickens and ducks decreased a lot. As a result, we can sell more and earn more, and it proved very good for us.” (RH\_M8)*

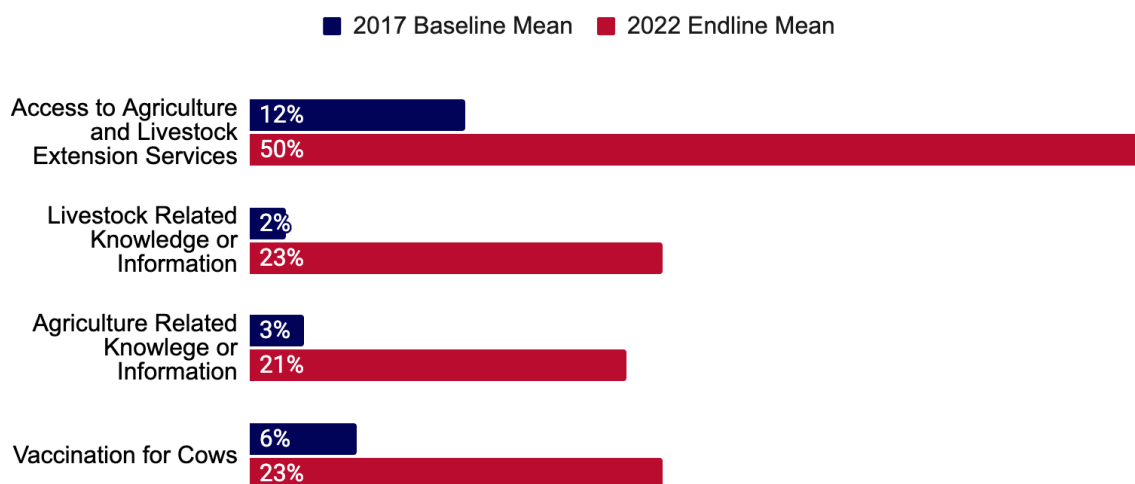
*“Many people rear cows, chickens and ducks and some are involved in farming. Previously, we couldn’t make much profit because we didn’t know about the techniques. Now, people are learning new things daily and improving their condition. They think about... building a house or about education for their children.” (FFG18\_F5)*

**These improvements in survival rates of (and therefore income from) livestock after the adoption of improved livestock practices reinforced their use.** Participants explained that prior to the SHOUHARDO III activities, many of their livestock and poultry would die. After SHOUHARDO III trainings and information dissemination, participants were able to understand the health needs of their livestock and cattle, including the vaccinations, nutrition, and shed hygiene practices necessary to prevent diseases and death.

**Increased access to public agricultural and livestock extension services also may have facilitated the adoption of improved practices.** In the treatment areas, more farmers reported having access to agricultural extension services from the Government of Bangladesh at endline (51.6%) than at baseline (12%). At endline, all services had increased access especially in agriculture related knowledge, livestock knowledge and information), and cow vaccinations).

Figure 3.11: Pre-Post Analysis - Percent of farmers with access to agriculture and livestock extension services from the Government of Bangladesh (RQI.1)

Percentage of farmers



Many qualitative participants in best case scenario villages reported being connected to agricultural extension officers by SHOUHARDO III for livestock and agriculture information and services. Participants reported using mobile applications and hotlines to access information related to pest control and disease information as well as livestock care and advice, and most participants in best case scenario villages knew and used local agriculture service providers to purchase high quality seeds and other agricultural inputs.

**SUB-PURPOSE 1.2: INCREASED ACCESS TO PREFERRED AGRICULTURAL MARKETS FOR PEP (FEMALE AND MALE)**

The second pathway or sub-purpose to increased equitable access to income and nutritious food was through increased access to preferred agricultural markets for PEP. As shown in the theory of change for Purpose I in Figure 3.2, participants mainly attributed the increased access to preferred agricultural markets to more accessible market information and to a lesser extent to the application of business skills in farming. While CARE hypothesized that improved prices would lead farmers to producing competitive products, participants instead reported the opposite: newly produced competitive products improved the prices of products. However, improved prices did contribute directly to Purpose I, increased equitable access to income.

**OUTCOME 1.2.1: PEP FARMERS PRODUCE COMPETITIVE PRODUCTS**

Participants reported cultivating higher value horticultural crops using agricultural techniques as taught by SHOUHARDO III training, improving the quality and quantity of crops. Participants reported shifting their cultivation to higher value crops in part to be more market-oriented, intending to sell the excess production at markets and wanting the best chance at being competitive within those markets.

**OUTCOME 1.2.1.1: PEP APPLIED BUSINESS SKILL IN FARMING**

Participants reported applying business skills in farming largely with the sale of their produce and sale of livestock after rearing and often breeding them. Participants cited SHOUHARDO III’s business training when discussing first their choice of crops to plant (and choosing to plant crops that would be more desirable and sell better in markets) and then bargaining techniques that were crucial to the

sale of their crops post-harvest. Participants particularly valued the profitability of selling offspring from livestock. Multiple participants attributed their ability to sell offspring to the improved conditions of their livestock thanks to SHOUHARDO III's livestock rearing trainings.

*"I bought a bull for 20,000 tk. I can sell that at 50,000 tk [after rearing it]. And if I bought a cow at 20,000 tk, I could sell the calf at 20,000 tk after it gives birth." (FFG17\_F1)*

#### **OUTCOME 1.2.1.2: ACCESS TO MARKET INFORMATION FOR MALE AND FEMALE FARMERS**

Participants widely reported that their access to market information and linkages to markets have increased compared to the period before SHOUHARDO III implementation. Most participants reported using their mobile phone to contact people at the market for price information while others reported visiting markets in-person to understand market prices for produce. Both of these tactics they attributed to SHOUHARDO III training. Increased knowledge of market prices, no matter how participants acquired the knowledge, helped participants to receive more fair prices for their products when selling in-person at markets or to wholesalers.

*"When we sell goods from home, first, we collect information about the market price for that day through a mobile phone. If the price is the same as the market price, then we sell the goods. Otherwise we don't sell the goods." (FYFG3\_F1)*

**Participants widely reported using wholesalers who they made connections with because of SHOUHARDO III implementation as a means of selling their agricultural goods.** Women especially valued the increased number of and their familiarity with wholesalers who buy their produce at their doorstep. This allows women to sell their produce for a profit without needing a male member of the household to go to the market for them. Women also valued being able to save time and money, no longer needing to travel to far away markets to sell their goods. They reported feeling that it is a fair trade-off for selling produce at a slightly discounted rate to wholesalers, since those wholesalers mark-up goods given costs for transporting them to markets. While participants were widely familiar with wholesalers, only some reported using collection points or being part of collection point groups. In areas where participants did not have collection points, they reported that SHOUHARDO III had told participants about them but did not implement them.

*"Now we can sell the crops from our home and make more profit than before...We don't have to spend time selling the crops. We can collect grass for the cows during that time instead of taking and selling the goods at market." (FYFG11\_F1)*

#### **OUTCOME 1.2.1.3: IMPROVED PRICES FOR PEP PRODUCTS**

All participants interviewed reported receiving higher prices for their products now than in the times prior to SHOUHARDO III implementation. Participants attributed higher prices to improved quality and quantity of produce due to improved agricultural techniques introduced by SHOUHARDO III training. These improved techniques include using higher quality seeds, compost, and improved planting techniques, all leading to higher quality produce being sold at higher prices. Participants also reported that increased linkages to markets and wholesalers, facilitated by SHOUHARDO III, allowed participants to sell their produce for fairer, higher prices. Some participants specifically cited the bargaining techniques they were taught as part of SHOUHARDO III training as being instrumental in their ability to receive fair prices for their produce and ability to continue earning additional household income.

*"Previously, after harvesting the crops, we couldn't sell the crops because there weren't many wholesalers. We had to sell it at the price they gave us. We didn't know how to sell it outside or communicate with other sources. But now many wholesalers come to our crop field, and we bargain about the price of the crops. We sell to the wholesaler who gives us a good price." (MYFG3\_M1)*

### SUB-PURPOSE I.3: INCREASED OFF-FARM INCOME FOR PEP

The third strategy to increase equitable access to income and nutritious food was through increased off-farm income for PEP men and women. While participants overwhelmingly cited livestock rearing and increased vegetable cultivation as the main generators of additional household income from SHOUHARDO III activities, many participants cited both men and women being newly or more involved in off-farm income-generating activities, largely disaggregated by gender, due to SHOUHARDO III support. As shown in the theory of change for Purpose I in Figure 3.2, participants mainly attributed increased off-farm income to increased access to business inputs and increased youth employment capabilities. Improved entrepreneurship skills was a less prominent factor identified in achieving this strategic sub-purpose.

#### OUTCOMES I.3.1.1 AND I.3.1.2: IMPROVED ENTREPRENEURSHIP SKILLS AND ACCESS TO BUSINESS INPUTS

After SHOUHARDO III trainings in off-farm income generating activities (IGAs) and provision of some necessary inputs for those IGAs, participants reported that more men are now involved in electrical work, driving, welding, mobile servicing, and vaccinating livestock, and more women are involved in tailoring, beautician services, and craftsmanship (like weaving and beading). As a result of these off-farm activities, men and women reported increased income. Tailoring was particularly popular among women, who specifically cited that they received support from SHOUHARDO III through training on tailoring and/or funds to purchase sewing machines. Many participants reported that off-farm IGAs for men, like driving and electrical work, require men to move elsewhere to find work in those fields, since there is little demand in their communities for such skills.

Figure 3.12: A SHOUHARDO III Tailoring Training Participant Earning ~30,000tk Per Month from Her Tailoring Business (RQI.1)



*“If she doesn’t have a sewing machine, she can’t do the sewing work. SHOUHARDO gave the money so she could do it and she changed her financial status with the help.” (FFG18\_F2)*

*“There wasn’t scope for learning these types of jobs before, but they learned the jobs now. The income of the people has increased now. For example, now one can earn 500tk compared to 200tk after learning the work of carpenters, masons.” (RH\_M7)*

**Participants reported that with new, off-farm means of earning income, they have increased their household income and are able to contribute to their children’s education, household expenses, and add to savings.** Several women interviewed specifically cited their ability to be more financially independent from their husbands now that they are engaged both in profitable on-farm income-generating activities, such as livestock rearing, and off-farm income-generating activities, mainly tailoring.

*“Our income has increased now, and we are educating our children with the earnings.” (MFG3\_M1)*

*“After receiving the training on tailoring, we are doing tailoring businesses. We can use the earnings as we want. In the past, we have had to take every penny from our husbands, like if my child asked for some money before going to school. Then I had to ask my husband for the money. But after the training, we don’t have to depend on our husbands for this matter. We can give money to a child from our own earnings. We cultivate vegetables also. After fulfilling the needs of our family, we can sell the residual to earn some money. We can use the money as we want.” (FFG6\_F1)*

#### **OUTCOMES I.3.2.1: PEP YOUTH EMPLOYMENT CAPABILITIES**

Vocational training sessions led by SHOUHARDO III for youth are seen as catalysts for increased employment and income among youth, according to participants interviewed. Youth participants reported attending employment training based on gender: Driving, motor servicing, machinery, electrician, and mobile servicing training for men and tailoring training for women. Many participants who attended vocational training sessions in 2019 reported still working in the industry in which they were trained at the time of their interview at the end of 2021 or early 2022. Several participants reported that the vocational training focused on youth allowed them to not only become employed but become more financially independent from their parents and use their income for education as well. Several participants reported working in Dhaka, outside of their communities, because of greater opportunities for employment, especially electrician work. One participant noted that without electricity in his community, he could not perform the electrical work he was trained to do.

*“The unemployed youth got a chance to learn something and now they are earning from the work that they learned.” (FFG2\_F1)*

*“The arrangement of tailoring training for the women proved [to be] very good. Now, many women do tailoring work here. And the boys received computer training. They improved their condition a lot.” (FFG16\_F1)*

*“I received a two-month long training on electric house wiring in Netrokona (district). After completion of the training, I am working as an electric house wiring technician in our area. I am earning around 2,000tk to 2,500tk every month.” (MYFG6\_M1)*

#### **SUB-PURPOSE I.4: INCREASED UTILIZATION OF FINANCIAL SERVICES BY PEP (FEMALE AND MALE)**

The fourth strategy to increase equitable access to income and nutritious food was through increased utilization of financial services by PEP men and women. As shown in the theory of change for Purpose I in Figure 3.2, participants mainly attributed increased utilization of financial services to increased savings of PEP women, men, and youth. Participants explained that they were able to increase their savings due to improved financial management skills, which also improved PEP women, men and youths’ ability to apply for loans through VSLAs. Access to formal financial institutions was a less prominent factor identified in achieving this sub-purpose.

#### **OUTCOME I.4.1.1: PEP FINANCIAL MANAGEMENT SKILL INCREASED**

Participants in best-case scenario villages increased savings by improving financial management skills and increasing their abilities to successfully apply for loans through participation in SHOUHARDO III-established VSLAs. By improving access to savings, loans, and interest-based profits, participation in VSLAs facilitated women’s savings and livelihood diversification, resulting in increased incomes. VSLAs are extremely popular among interviewed participants, who unanimously agreed that the groups, and the financial management opportunities that are provided in them, have increased their financial management skills and have helped them increase their savings. The groups all have a similar structure, both in the leadership structure (decided through voting) and the function of the groups,



with members depositing savings every 15 days and, when needed, taking loans with low interest rates. The VSLAs then spread interest among all members at the end of the year, allowing participants to further increase their savings. Participants reported that this schedule, wherein they contribute savings at regular intervals, has been the main catalyst to increasing their savings, and appreciate the opportunity to take loans when needed, knowing they can repay them with low interest. Most participants reported taking loans during times of family crisis (such as for health problems or urgently needed supplies) and reported often using the end-of-year interest-based profits to purchase inputs for small business activities (like seeds, livestock feed, or sewing machines) or to further add to their savings. Participants reported that VSLAs groups were particularly important during COVID when many community members were without work. Participants reported that VSLAs are so popular that not only are non-participants in their communities trying to join VSLAs, but that neighboring communities are starting their own VSLAs groups.

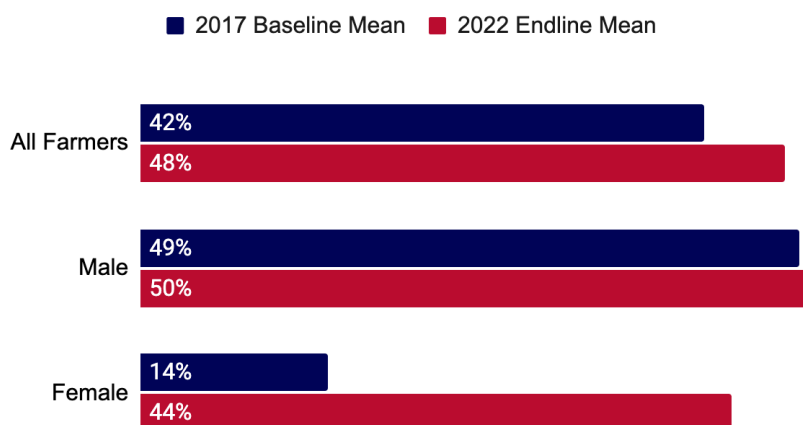
*“If I keep money at home, then there is a possibility of spending the money. My children, husband, father, or mother-in-law may ask me for money. Then I have to give them money. But I can’t give them money if I keep the money in the [VSL] group...At the end of the year, after dividing the money, one can buy ducks and chickens. By selling the eggs, we can use the money for our household needs. We can use the money on children’s education.” (SP\_F3)*

**OUTCOME 1.4.2: PEP’S ACCESS TO FINANCIAL INSTITUTIONS (FORMAL AND INFORMAL) WITH PRO-POOR PRODUCTS**

Findings from the pre-post analysis show that, even in non-best-case-scenario villages, the use of financial services among farmers increased between baseline and endline. As shown in Figure 3.13, the share of farmers using financial services increased by 5 percentage points. The primary driver of the change in access to financial services came from female farmers; the share of female farmers accessing financial services tripling from baseline to ending (Figure 3.13).

Figure 3.13: Pre-Post Analysis - Farmers who used financial services in the past 12 months (RQ1.1)

Percentage of farmers who used financial services in the past 12 months



When it’s broken into access to credit and access to savings services, more farmers reported having access to savings (40.6%) than credit (19.4%). While men and women reported having equal levels of access to savings (41.2% - Male, 38.9% - Female), far more male farmers (24.3%) have access to credit than female farmers (5.7%). Treatment farmers who use savings services were most likely to utilize Microfinance Institutions (MFIs) or Non-Governmental Organizations (NGOs) followed

distantly by Village savings and credit groups. The credit sources that are primarily used in the treatment areas are MFI/NGOs (10.7%) followed by relatives and neighbors (6.4%).

**In contrast, findings from the qualitative analysis indicate that participants were able to access financial services primarily from Village Savings and Loans Associations (VSLAs) and preferred using these services over NGOs or other MFIs.** Participants interviewed did not report increased access to formal financial institutions, but all participants were either participating in or familiar with VSLAs established as part of SHOUHARDO III. The VSLAs, acting as informal financial institutions, are the main source of loans for participants and act as a savings mechanism for their income as they regularly contribute money to the groups. Participants prefer taking loans from VSLAs, as opposed to other NGOs or banks, because there are fewer prerequisites and formalities required to take loans from VSLAs groups and interest rates are much lower.

*“If the people want to take a loan from any NGO, then they have to maintain so many formalities, but they don’t need to maintain any of that in the VSL association. That’s why it has proved very beneficial for them.” (SP\_F3)*

**Qualitative results reveal that VSLAs were especially important for women beyond simply increasing their access to financial services, as they facilitated women’s involvement in income-generating activities.** Some women used the savings, loans, or interest-based profits from VSLAs to invest in alternative livelihood activities. Women reported taking out loans to start or expand businesses, using the money to purchase start-up inputs such as poultry chicks, livestock feed, and sewing machines. Some women also used their savings or money gained from interest at the end of the year for the same purposes. In addition to being able to invest in income-generating activities, most women considered the loan interest they gained from being involved with VSLAs as another form of income. Our qualitative data suggests that these mechanisms have the potential to increase women’s income under best case scenario conditions.

#### INDICATOR TABLES FOR PURPOSE I

**Table 3.3: Poverty Indicators (RQ1.1)**

| Indicator  | Baseline value      | Endline value       | Raw Difference (Baseline-Endline) | SD of BL value | SD of EL value | P value of difference |
|--|---------------------|---------------------|-----------------------------------|----------------|----------------|-----------------------|
| Per capita expenditures (as a proxy for income) of USG-assisted areas                | \$2.03<br>n = 7,921 | \$2.22<br>n = 5,469 | \$0.19                            | 0.8            | 0.9            | 0.000***              |
| Male and female adults   | \$2.03<br>n = 7,323 | \$2.21<br>n = 5,238 | \$0.18                            | 0.8            | 0.8            | 0.000***              |
| Adult female, no adult male  | \$1.93<br>n = 508   | \$2.25<br>n = 213   | \$0.32                            | 1.1            | 1.5            | 0.006**               |
| Adult male, no adult female  | \$2.05<br>n = 89    | NA                  | NA                                | 0.8            | NA             | NA                    |
| Child, no adults   | NA                  | NA                  | NA                                | NA             | NA             | NA                    |
| Prevalence of poverty: Percent of people living on less than \$1.25/day <sup>2</sup> | 45.7<br>n = 7,921   | 36.3<br>n = 5,469   | -9.4                              | 49.8           | 48.3           | 0.000***              |
| Male and female adults   | 45.3<br>n = 7,323   | 35.8<br>n = 5,238   | -9.5                              | 48.1           | 48.2           | 0.000***              |
| Adult female, no adult male  | 50.3<br>n = 508     | 46.2<br>n = 213     | -4.1                              | 69.0           | 49.9           | 0.240                 |
| Adult male, no adult female  | 45.7                | NA                  | NA                                | 58.8           | NA             | NA                    |

| Indicator  | Baseline value    | Endline value    | Raw Difference (Baseline-Endline) | SD of BL value | SD of EL value | P value of difference |
|--|-------------------|------------------|-----------------------------------|----------------|----------------|-----------------------|
| Child, no adults   | NA                | NA               | NA                                | NA             | NA             | NA                    |
| Mean depth of poverty (expressed as percent of poverty line) | 11.1<br>n = 7,921 | 7.6<br>n = 5,469 | -3.5                              | 16.3           | 13.2           | 0.000***              |
| Male and female adults                                       | 11.0<br>n = 7,323 | 7.4<br>n = 5,238 | -3.6                              | 15.7           | 12.8           | 0.000***              |
| Adult female, no adult male                                  | 13.6<br>n = 508   | 12.8<br>n = 213  | -0.8                              | 24.6           | 18.5           | 0.633                 |
| Adult male, no adult female                                  | 8.6<br>n = 89     | NA               | NA                                | 14.4           | NA             | NA                    |
| Child, no adults   | NA                | NA               | NA                                | NA             | NA             | NA                    |

ns = not significant, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

**Table 3.4: Agricultural Indicators (RQ1.1)**

| Indicator   | Baseline value    | Endline value     | Raw Difference (Baseline-Endline) | SD of BL value | SD of EL value | P value of difference |
|---|-------------------|-------------------|-----------------------------------|----------------|----------------|-----------------------|
| Percentage of farmers who used financial services in the past 12 months                           | 42.3<br>n = 1,235 | 47.6<br>n = 1,110 | 5.3                               | 49.4           | 49.96          | 0.010*                |
| Male farmers  | 49.2<br>n = 1,000 | 50.2<br>n = 817   | 1.0                               | 50.1           | 50.03          | 0.672                 |
| Female farmers  | 13.6<br>n = 235   | 40.3<br>n = 293   | 26.7                              | 34.1           | 49.14          | 0.000***              |
| Percentage of farmers who used three sustainable agricultural practices in the past 12 months     | 51.1<br>n = 1,235 | 67.4<br>n = 1,110 | 16.3                              | 50.0           | 46.91          | 0.000***              |
| Male farmers  | 58.8<br>n = 1,000 | 78.3<br>n = 817   | 19.5                              | 49.3           | 41.28          | 0.000**               |
| Female farmers  | 19.2<br>n = 235   | 37.3<br>n = 284   | 18.1                              | 39.1           | 48.44          | 0.000***              |
| Percentage of farmers who used at least two sustainable crop practices in the past 12 months      | 56.5<br>n = 1,235 | 56.1<br>n = 1,110 | -0.4                              | 49.6           | 49.65          | 0.846                 |
| Male farmers  | 66.8<br>n = 1,000 | 72.5<br>n = 817   | 5.7                               | 47.2           | 44.67          | 0.008**               |
| Female farmers  | 13.5<br>n = 235   | 10.8<br>n = 293   | -2.7                              | 34.0           | 31.03          | 0.346                 |
| Percentage of farmers who used at least two sustainable livestock practices in the past 12 months | 34.9<br>n = 1,235 | 59.9<br>n = 1,110 | 25.0                              | 47.7           | 49.02          | 0.000***              |
| Male farmers  | 36.0<br>n = 1,000 | 61.6<br>n = 817   | 25.6                              | 48.1           | 48.66          | 0.000***              |
| Female farmers  | 30.7<br>n = 235   | 55.4<br>n = 293   | 24.7                              | 45.8           | 49.80          | 0.000***              |
| Percentage of farmers who used at least two sustainable NRM practices in the past 12 months       | 0.8<br>n = 1,235  | 1.2<br>n = 1,110  | 0.4                               | 8.9            | 10.68          | 0.328                 |

| Indicator   | Baseline value    | Endline value     | Raw Difference (Baseline-Endline) | SD of BL value | SD of EL value | P value of difference |
|---|-------------------|-------------------|-----------------------------------|----------------|----------------|-----------------------|
| Male farmers  | 1.0<br>n = 1,000  | 0.9<br>n = 817    | -0.1                              | 9.9            | 9.58           | 0.827                 |
| Female farmers  | 0.0<br>n = 235    | 1.8<br>n = 293    | 1.8                               | 0.0            | 13.20          | 0.021*                |
| Percentage of farmers who used improved storage practices in the past 12 months   | 37.7<br>n = 1,235 | 38.4<br>n = 1,110 | 0.7                               | 48.5           | 48.65          | 0.728                 |
| Male farmers  | 44.2<br>n = 1,000 | 49.7<br>n = 774   | 5.5                               | 49.8           | 50.03          | 0.022*                |
| Female farmers  | 10.6<br>n = 235   | 7.2<br>n = 293    | -3.4                              | 30.6           | 25.84          | 0.171                 |
| Percent of farmers that have access to agriculture and livestock extension services from agriculture and livestock departments of GoB | 11.6<br>n = 1,235 | 51.6<br>n = 1,110 | 40.0                              | 32.0           | 50.00          | 0.000***              |
| Percentage of male farmers with access to services  | 12.6<br>n = 1,000 | 53.5<br>n = 817   | 40.9                              | 33.2           | 49.91          | 0.000***              |
| Percentage of female farmers with access to service   | 7.2<br>n = 235    | 46.5<br>n = 293   | 39.3                              | 26.0           | 49.96          | 0.000***              |
| Agriculture related knowledge or information  | 2.6<br>n = 1,235  | 19.6<br>n = 1,110 | 17.0                              | 15.9           | 39.69          | 0.000***              |
| Agriculture inputs (Cash or kind, i.e. seed, fertilizer, irrigation)  | 2.6<br>n = 1,235  | 10.0<br>n = 1,110 | 7.4                               | 16.0           | 30.06          | 0.000***              |
| Agriculture service through field visit   | 0.6<br>n = 1,235  | 4.1<br>n = 1,110  | 3.5                               | 7.9            | 19.79          | 0.000***              |
| Agriculture through demo plot   | 0.2<br>n = 1,235  | 1.3<br>n = 1,110  | 1.1                               | 4.4            | 11.46          | 0.002*                |
| E-agriculture services through hotline  | 0.2<br>n = 1,235  | 4.2<br>n = 1,110  | 4.0                               | 4.7            | 20.08          | 0.000***              |
| Livestock related knowledge and information   | 2.0<br>n = 1,235  | 22.3<br>n = 1,110 | 20.3                              | 14.0           | 41.65          | 0.000***              |
| Vaccination for chicken and duck  | 0.8<br>n = 1,235  | 11.2<br>n = 1,110 | 10.4                              | 8.8            | 31.53          | 0.000***              |
| Vaccination for goat and sheep  | 1.3<br>n = 1,235  | 7.0<br>n = 1,110  | 7.0                               | 11.4           | 27.61          | 0.000***              |
| Vaccination for cows  | 5.6<br>n = 1,235  | 19.8<br>n = 1,110 | 19.8                              | 23.0           | 43.56          | 0.000***              |
| Other services  | 0.8<br>n = 1,235  | 7.8<br>n = 1,110  | 7.8                               | 9.1            | 28.01          | 0.000***              |

ns = not significant, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

#### **I.1.4 DETAILED FINDINGS OF PURPOSE 2: IMPROVED NUTRITIONAL STATUS OF CHILDREN UNDER FIVE YEARS OF AGE, PREGNANT AND LACTATING WOMEN AND ADOLESCENT GIRLS**

##### OVERVIEW OF PURPOSE 2 FINDINGS

The second strategy SHOUHARDO III used to achieve its goal was through improved nutritional status of women and children. In this section, we first look at whether the SHOUHARDO III program had any effect on women's and children's nutrition status from a quantitative perspective. The research team used the pre-post evaluation to assess any changes in nutrition status and the impact evaluation to analyze whether these differences were due to the SHOUHARDO III program. Secondly, we assess whether the SHOUHARDO III program had any effect on addressing the barriers of improved nutritional status. These barriers fell under three sub-purposes: (1) increased utilization of nutritious food for PLW, U5 children, and adolescent girls; (2) improved use of health and nutrition services by PEP household members; and (3) reduced-prevalence of water-borne diseases. For each of these sub-purposes, the research team relied on a mix of the three different evaluation methods.

The **pre-post analysis** compared measures under each sub-purpose and outcomes for a sample of households in SHOUHARDO III communities who participated in a household survey at baseline to a similar group of households from the same communities who participated in the endline survey in 2021. The difference between these measures can be understood as changes in the sub-purposes and outcomes in these communities that may have been caused by SHOUHARDO III interventions, by broader changes in Bangladesh during that period, or by a combination of the two; a pre-post design does not allow the research team to identify what caused any of the measured changes. Similarly, the perspectives of participants in the **qualitative study** in "best case scenario" communities where SHOUHARDO III implementation was particularly strong provides descriptions of the changes they have experienced since the project began and perspectives on how and why changes occurred. While participants might have attributed changes to SHOUHARDO III, this does not provide definitive causal evidence of its effects. Rather, it highlights possible pathways of change and insights on project implementation, acceptance, and engagement. The impact analysis can help to clarify our understanding of the cause of any measured changes over time by comparing the sub-purposes and outcomes in the treatment villages to the similar comparison villages.

Overall, when looking at improved nutrition for women and children from the perspective of the pre-post analysis, **we see positive results of improved women's nutritional status and decreased malnutrition of children under five years of age across all three malnutrition indicators**; however, the impact evaluation suggests that **we cannot confidently attribute decreased malnutrition of children under five years of age to the SHOUHARDO III program**. The impact evaluation finds no significant differences in the rates of children who are underweight, stunted, or wasted between SHOUHARDO III and non-SHOUHARDO III villages.

SHOUHARDO III appears to have had some effect on the *sub-purposes* that they hypothesized could facilitate their overall goal of improving nutritional status of women and children. For example, dietary diversity is an intermediary outcome (or sub-purpose) to achieving improved nutritional status. The impact evaluation reveals that increased dietary diversity for women *did* positively differ between treatment and comparison villages, suggesting that the SHOUHARDO III program contributed to women's dietary adequacy. When exploring each Sub-Purpose, we observe the following conclusions as noted in Table 3.5.

**Table 3.5: Key Findings on the Extent to Which Sub-Purpose Pathways Produced Positive Outcomes (RQ1.2)**

| Sub-Purpose  | Key Findings from the Qualitative and Quantitative Research  |
|--|--|
| <p><b>Sub-Purpose 2.1:</b><br/>Increased Utilization of Nutritious Foods by PLW, Children U5, and Adolescent Girls</p> | <ul style="list-style-type: none"> <li>● Quantitative pre-post findings indicate improved nutritional status of women after the program. Although the pre-post findings show improvements in children’s nutrition status after the program, the impact evaluation did not find a significant difference in nutrition status between SHOUHARDO III villages and comparison villages.</li> <li>● The impact evaluation findings indicate statistically significant improvements in increased dietary diversity for women, with the impact evaluation noting a 5% difference between treatment and comparison villages.</li> <li>● Qualitative findings credit improved changes in women’s dietary diversity to (1) increased knowledge on the benefits of dietary diversity, (2) increased access to nutritious food through food rations or cash stipends, (3) increased engagement in food production and livestock cultivation, and (4) equitable decision-making within households.</li> <li>● The pre-post analysis reveals that, compared to children at the beginning of the SHOUHARDO III program, the share of children at the end of the program exclusively breastfed for the first six months and the share of children receiving a minimally acceptable diet increased. In best-case-scenario villages, participants credited this to cash and in-kind transfers, SHOUHARDO III nutrition trainings, and regular growth monitoring. The impact evaluation suggests, however, that we cannot confidently attribute exclusive breastfeeding improvements to SHOUHARDO III overall due to similar rates of infants exclusively breastfed in comparison villages. We do find meaningful impacts in the percentage of children receiving minimally acceptable diets that can be attributed to SHOUHARDO III, though.</li> <li>● Respondents stated that households are now more likely to share meals together and ensure equal allocation of nutritional foods, and they link this as a contributor to a reduction in malnutrition among U5 children, PLW, and adolescent girls.</li> <li>● Qualitatively, participants attributed SHOUHARDO III sessions that gave basic life skills education and trainings as factors that contributed to improved behaviors in household health, hygiene, sanitation and nutrition. Quantitative findings show that the share of households having a handwashing station with soap in their households increased by 49%, which may have contributed to increased handwashing practices.</li> <li>● Respondents reported de-stigmatization of menstrual care and improved awareness of health and hygiene practices for adolescent girls, and they stated that SHOUHARDO-based impacts on these factors has led to a decrease in teen pregnancy and marriage.</li> </ul> |
| <p><b>Sub-Purpose 2.2:</b><br/>Improved Use of Health and Nutrition Services by PEP Household Members</p>              | <ul style="list-style-type: none"> <li>● The pre-post evaluation demonstrates that access to government primary health care substantially increased for women and children after the SHOUHARDO III program. This is especially true for antenatal care, where 72% of women reported having access to antenatal care at endline compared to just 5% at baseline.</li> <li>● Qualitative participants from best-case scenario villages attributed the increase in the use of health and nutrition services to three main factors. (1) improved access to healthcare providers (at home or in community clinics) (2) free nutritional food and supplements, (3) knowledge of services offered by SHOUHARDO III. Respondents did not credit this change to increased Ministry of Health and Family Welfare’s (MOH&amp;FW) support and services to vulnerable communities.</li> <li>● Findings from the impact evaluation confirm that improved antenatal access can be attributed in part to SHOUHARDO III.</li> <li>● Despite heightened participant motivation to seek out most SHOUHARDO III-promoted health services, pre-post findings show a decrease in contraceptive use.</li> </ul>   |
| <p><b>Sub-Purpose 2.3:</b><br/>Reduced Prevalence of Water-Borne Illnesses</p>   | <ul style="list-style-type: none"> <li>● Pre-post evaluation findings demonstrate that there was a decrease in children’s diarrheal rate. In best-case scenario villages, qualitative findings credit the decrease to knowledge about water quality due to SHOUHARDO III programming and to greater access to improved sanitation facilities. The impact evaluation reveals that this improvement cannot be confidently attributed to SHOUHARDO III in its entirety, however.</li> <li>● The percent of households at endline using an improved drinking source has increased compared to baseline, and participants reported that poor and extreme poor (PEP) households from best case scenario villages were able to access</li> </ul>  |

| Sub-Purpose | Key Findings from the Qualitative and Quantitative Research   |
|-------------|---|
|             | <p>improved water sources, especially tube wells, through SHOUHARDO III funding, local governments, or Village development committees (VDC's).</p> <ul style="list-style-type: none"> <li>• Overall, water accessibility remains a challenge. Households who reported being able to access water sources within a 30-minute round trip declined from 27.9% to 16.1%.</li> <li>• Pre-post findings reveal only very small improvements in the use of water treatment technologies, with the overall share of households still extremely low (1.6%). Qualitative results also indicated that SHOUHARDO III services may have dampened motivation to use local water testing services.</li> <li>• By endline, open defecation practices were almost non-existent. Best-case scenario participants credited this to increased awareness and increased access to hygienic latrines. Pre-post results confirm that the share of households using an improved sanitation facility more than tripled between baseline and endline.</li> </ul> |

## OVERALL ANALYSIS OF QUANTITATIVE RESULTS REGARDING WOMEN AND CHILDREN'S NUTRITIONAL STATUS

### Women's Nutritional Status

To measure women's nutritional status, the research team relied on body mass index (BMI). A woman's BMI can give insights into their nutritional health. A high BMI (>25) can mean a woman is overweight while a low BMI (<18.5) can indicate that a woman has low energy or decreased energy reserves. Malnourished women experience increased risks for both themselves and their children. Underweight mothers are more likely to have infants with a low birthweight, further increasing the child's risk of stunted mental/motor development, obesity, hypertension, cardiovascular disease, and diabetes (USAID, 2017).

**The pre-post evaluation indicates that women's nutritional status, as measured by BMI, improved between baseline and endline.** The share of women who were mildly or severely underweight decreased from 27.7% at baseline to 20.9% at endline.

Figure 3.14: Pre-Post Analysis - Change in prevalence of underweight women from baseline to endline (RQ1.2)

### Prevalence of underweight women



### Children's Nutritional Status

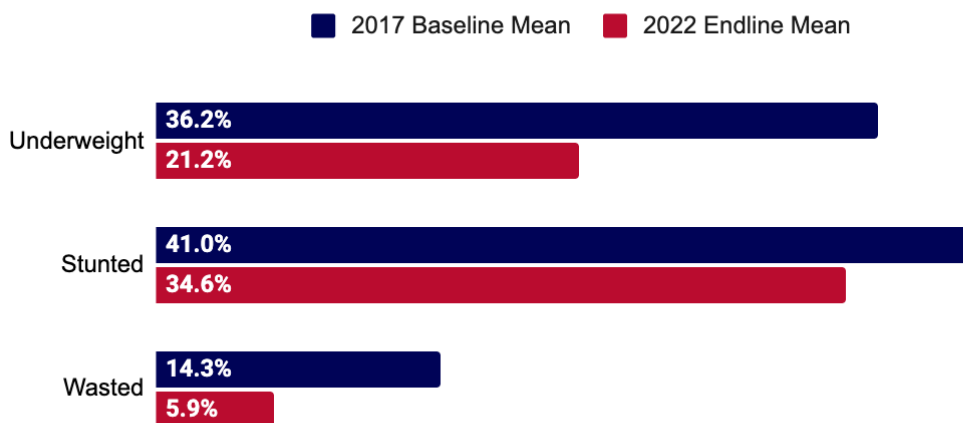
For this evaluation, we analyzed three indicators that measure malnutrition among children: underweight, stunting, and wasting. Childhood stunting is an important measurement of children's

well-being as well as an indicator used to measure social inequalities (Onis and Branca 2016). Children who face malnutrition can have long term growth and development issues which can impact their economic productivity and their physical and mental wellbeing later in life (Shrestha et al. 2022).

**Findings from the pre-post evaluation show that malnutrition among children under five years of age declined across all three indicators.** The research team observed the largest decrease for underweight rates, which dropped by 15% (Figure 3.15). Stunting and wasting rates declined by 6% and 8%, respectively.

Figure 3.15: Pre-post Analysis - Changes in malnutrition across three indicators (RQ1.2)

### Prevalence of children under five years old

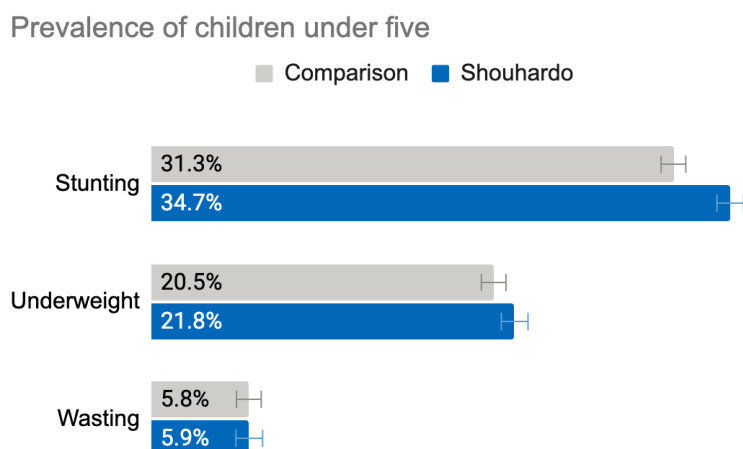


**However, the impact evaluation is not able to identify any causal impact of the SHOUHARDO III program on all three indicators of child nutritional status.** As shown in Figure 3.16, there are no significant differences in the rates of children who are underweight, stunted, or wasted between SHOUHARDO III and non-SHOUHARDO III villages. These results indicate the SHOUHARDO III program does not appear to have reduced childhood malnutrition rates more so than what occurred in other, comparable communities. That is, rates of underweight, stunted, and wasted children have improved in SHOUHARDO III villages as we see in the pre-post analysis, but so did rates in non-SHOUHARDO III villages.<sup>20</sup>

<sup>20</sup> Notes that stunting rates in SHOUHARDO III villages and non-SHOUHARDO III villages were above 40% at baseline (see Table 2.2).



Figure 3.16: Impact Evaluation Analysis - Prevalence of underweight, stunted, and wasted children under 5 years of age in comparison and SHOUHARDO III villages<sup>21</sup> (RQ1.2)



In column 1 of Table 3.6, we use all children in our sample, while using Regression Adjustment to control for each child’s age category, gender, the predicted baseline stunting rate in each village, and fixed effects for each originally matched pair. We find that the stunting rate is slightly higher in the SHOUHARDO III treatment villages than in the comparison villages, but this difference is not statistically significant. In column 2, we further control for polynomials in each village’s mean per capita consumption level, poverty rate, and mean mothers’ education levels, as well as whether the village experienced a major shock and the mean number of shocks reported by households in each village. With all of these controls in place, we find that the difference between treatment and comparison villages is effectively zero. In columns 3-7, we alternatively employ propensity score matching, kernel-based matching, k-nearest neighbor matching, and coarsened exact matching using the aforementioned covariates. While the impact estimates vary slightly under each of these alternatives, in six of the seven specifications the impact estimate is small and in none of these specifications is it statistically significant.

<sup>21</sup> This figure reflects adjusted means which are adjusted for all of the base covariates in the regressions for each outcome. They reflect only the differences between the villages due to the treatment status and not due to differences in other variables that are included as controls. Stunting in this figure is from the base covariates regression adjustment analysis for consistency. All other analyses (full covariates, propensity score matching, kernel matching, k-nearest neighbor matching, and coarsened exact matching) show no significance and have overlapping confidence intervals.

**Table 3.6: Impact Evaluation Results - Impacts on Child Nutrition (RQI.2)**

|                               | Regression Adjustment <sup>22</sup> | Regression Adjustment | Propensity Score Matching <sup>23</sup> | Kernel Matching <sup>24</sup> | K-Nearest Neighbor Matching <sup>25</sup> | Coarsened Exact Matching <sup>26</sup> | Coarsened Exact Matching |
|-------------------------------|-------------------------------------|-----------------------|---|-------------------------------|---|--|--------------------------|
|                               | Base Covariates                     | Full Covariates       | Full                                    | Full                          | Full                                      | Base                                   | Full                     |
|                               | -1                                  | -2                    | -3                                      | -4                            | -5  | -6                                     | -7                       |
| Treatment Effect on...        |                                     |                       |   |                               |   |  |                          |
| Stunting                      | 0.034                               | 0.02                  | -0.012                                  | 0.019                         | 0.009                                     | -0.018                                 | -0.032                   |
| confidence interval           | [0.004, 0.065]                      | [-0.010, 0.049]       | [-0.059, 0.036]                         | [-0.017, 0.055]               | [-0.031, 0.049]                           | [-0.065, 0.028]                        | [-0.077, 0.012]          |
| p-value                       | -0.03                               | -0.2                  | -0.63                                   | -0.29                         | -0.66                                     | -0.44                                  | -0.15                    |
| N                             | 2590                                | 2590                  | 2590                                    | 2590                          | 2590                                      | 1827                                   | 1827                     |
| Underweight                   | 0.013                               | 0.012                 | -0.022                                  | -0.007                        | -0.009                                    | -0.023                                 | -0.026                   |
| confidence interval           | [-0.013, 0.038]                     | [-0.014, 0.038]       | [-0.059, 0.015]                         | [-0.039, 0.024]               | [-0.044, 0.025]                           | [-0.058, 0.012]                        | [-0.060, 0.007]          |
| p-value                       | -0.33                               | -0.37                 | -0.24                                   | -0.66                         | -0.6                                      | -0.19                                  | -0.12                    |
| N                             | 2592                                | 2592                  | 2592                                    | 2592                          | 2592                                      | 1840                                   | 1840                     |
| Wasting                       | 0                                   | -0.006                | -0.009                                  | 0.002                         | 0.002                                     | -0.015                                 | -0.014                   |
| confidence interval           | [-0.013, 0.013]                     | [-0.020, 0.008]       | [-0.032, 0.013]                         | [-0.016, 0.020]               | [-0.019, 0.023]                           | [-0.034, 0.005]                        | [-0.033, 0.005]          |
| p-value                       | -0.97                               | -0.41                 | -0.41                                   | -0.83                         | -0.85                                     | -0.14                                  | -0.16                    |
| N                             | 2587                                | 2587                  | 2587                                    | 2587                          | 2587                                      | 1827                                   | 1827                     |
| Infants exclusively breastfed | -0.002                              | 0.088                 | 0.084                                   | -0.011                        | 0.027                                     | -0.027                                 | -0.015                   |

<sup>22</sup> Regression adjustment used a set of variables to adjust the estimates of the means to compensate for differences between the SHOUHARDO III and comparison villages. Base covariates utilized the estimated baseline stunting while full covariates utilized village consumption, poverty, mothers' education, and whether or not the village faced a large shock.

<sup>23</sup> Propensity Score Matching (PSM) was done at the individual level and matched households located in SHOUHARDO III villages and households located in comparison villages on consumption, poverty, the mothers education, and whether or not the village faced a large shock.

<sup>24</sup> Kernel-based matching used the same set of covariates as PSM, but using a kernel estimator (rather than probit, as in PSM) to predict the likelihood that a household participated in SHOUHARDO III.

<sup>25</sup> K-Nearest Neighbor seeks to classify households based on the likelihood that a household in either the SHOUHARDO III villages or the comparison villages could be reasonably assumed to be part of the other group based on consumption, poverty, the mothers education, and whether or not the village faced a large shock. Children in those household groupings are then compared in terms of each outcome.

<sup>26</sup> Coarsened exact matching creates a comparison village with households whose characteristics exactly match those of treatment village households. To do so, it creates categories of each of the aforementioned covariates along which households are compared. For example, the approach creates categories of poverty such that, for each household participating in SHOUHARDO III, there is a comparison village household that also falls into the same poverty category. Children in the SHOUHARDO III and comparison village are then compared in terms of each outcome.

|  | Regression Adjustment <sup>22</sup> | Regression Adjustment | Propensity Score Matching <sup>23</sup> | Kernel Matching <sup>24</sup> | K-Nearest Neighbor Matching <sup>25</sup> | Coarsened Exact Matching <sup>26</sup> | Coarsened Exact Matching |
|--|-------------------------------------|-----------------------|---|-------------------------------|---|--|--------------------------|
|  | Base Covariates                     | Full Covariates       | Full                                    | Full                          | Full                                      | Base                                   | Full                     |
|  | -1                                  | -2                    | -3                                      | -4                            | -5  | -6                                     | -7                       |
| <i>confidence interval</i>                   | [-0.124, 0.120]                     | [-0.014, 0.190]       | [-0.086, 0.254]                         | [-0.139, 0.117]               | [-0.119, 0.173]                           | [-0.171, 0.118]                        | [-0.166, 0.135]          |
| <i>p-value</i>                               | -0.98                               | -0.09                 | -0.33                                   | -0.87                         | -0.72                                     | -0.71                                  | -0.84                    |
| N  | 227                                 | 227                   | 227                                     | 227                           | 227                                       | 170                                    | 170                      |
| Children receiving minimally acceptable diet | 0.057                               | 0.094                 | 0.034                                   | 0.06                          | 0.046                                     | 0.063                                  | 0.085                    |
| <i>confidence interval</i>                   | [0.001, 0.112]                      | [0.034, 0.154]        | [-0.048, 0.116]                         | [-0.004, 0.125]               | [-0.027, 0.119]                           | [-0.017, 0.142]                        | [0.006, 0.163]           |
| <i>p-value</i>                               | -0.05                               | 0                     | -0.41                                   | -0.07                         | -0.22                                     | -0.12                                  | -0.03                    |
| N  | 802                                 | 802                   | 802                                     | 802                           | 802                                       | 587                                    | 587                      |
| Child diarrhea                               | -0.005                              | -0.005                | -0.004                                  | -0.003                        | -0.005                                    | -0.007                                 | -0.007                   |
| <i>confidence interval</i>                   | [-0.017, 0.006]                     | [-0.017, 0.006]       | [-0.023, 0.014]                         | [-0.019, 0.014]               | [-0.023, 0.013]                           | [-0.024, 0.009]                        | [-0.023, 0.010]          |
| <i>p-value</i>                               | -0.35                               | -0.34                 | -0.64                                   | -0.76                         | -0.6                                      | -0.38                                  | -0.43                    |
| N  | 2595                                | 2595                  | 2595                                    | 2595                          | 2595                                      | 1835                                   | 1835                     |

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

We next assess whether these effects differed across children’s gender, the level of schooling attained by their mother, and the household’s poverty status. We show the treatment effects on child stunting rates across these subgroups in Table 3.7, with three alternative causal approaches shown for each subgroup estimate. **For both male and female children, there are no statistically significant impacts of SHOUHARDO III on stunting rates**, irrespective of which causal approach is used. We also find **similar estimates for both males and females for the underweight, MAD, and diarrhea outcomes** (omitted for brevity). We also find that the SHOUHARDO III program does not appear to have impacted stunting rates among children whose mothers have 6 years of school or fewer and those whose mothers have more years of schooling.

**The SHOUHARDO III program may have led to slightly lower stunting rates among children in households living below the poverty line, but also to slightly higher stunting rates among children living in households at or above the poverty line.** However, few of these estimates are statistically significant, and none are significant under all causal inference approaches.

**Table 3.7: Impact Evaluation - Impacts on Child Stunting by Subgroup (RQ1.2)**

| <b>Causal Inference Approach: Comparison Group And ...</b> | <b>Base</b> | <b>Regression Adjustment</b> | <b>Coarsened Exact Matching</b> |
|--|-------------|------------------------------|---------------------------------|
| Subgroups:   | (1)         | (2)                          | (3)                             |
| Treatment Effect for Males                                 | 0.036       | 0.021                        | 0.009                           |
|  | -0.16       | -0.38                        | -0.78                           |
| Treatment Effects for Females                              | 0.033       | 0.016                        | -0.041                          |
|  | -0.17       | -0.51                        | -0.17                           |
| Treatment Effect Among Children                            | 0.024       | 0.007                        | -0.018                          |
| w. Mothers >6 Yrs of School                                | -0.24       | -0.71                        | -0.53                           |
| Treatment Effect Among Children                            | 0.07        | 0.053                        | -0.012                          |
| w. Mothers <=6 Yrs of School                               | -0.07       | -0.16                        | -0.79                           |
| Treatment Effect Among Children                            | 0.082       | 0.059                        | 0.03                            |
| in HHs Above Poverty Line                                  | -0.01       | -0.04                        | -0.39                           |
| Treatment Effect Among Children                            | -0.036      | -0.055                       | -0.077                          |
| in HHs Below Poverty Line                                  | -0.3        | -0.12                        | -0.07                           |

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Our primary findings are based on comparisons between villages where the SHOUHARDO III program was active and non-SHOUHARDO III villages that had similar stunting rates at baseline. As Figure 3.48 highlights, within the treatment group of villages, this sample includes households who did not participate in the program directly. Within the comparison group of villages, this sample includes households who participated in similar, non-SHOUHARDO III programs.<sup>27</sup> This approach considers all households' treatment status to be set based on the overall village assignment (in essence, accounting for potential indirect channels through which non-participant households within a given treatment village may nonetheless experience impacts). However, in some instances, this may mask true effects among households participating in the SHOUHARDO III program. To assess this risk, we re-run our analysis of SHOUHARDO III impacts on child stunting based on alternative definitions of the treatment and comparison villages. In the first three columns of Table 3.8, we show these results when defining the treatment villages as only those households reporting participation in any nutrition program, and the comparison villages as those not reporting participation in any

<sup>27</sup> For more information about the types of programs households in comparison and SHOUHARDO III villages reported being involved in, see the Research Question 3 findings section.

nutrition program. Our findings remain quite similar, with **no statistically significant or meaningful effects detected**. In columns 4-6, we alternatively define our treatment villages as only households reporting participation in SHOUHARDO III, and the comparison villages as households not reporting participation in any SHOUHARDO III program. Again, we continue to find small but insignificant differences.

**Table 3.8: Impact Evaluation - Impacts Are Not Masked by Non-Participant Households in Treatment Villages or by Households Participating in Other Programs in Comparison Villages (RQ1.2)**

| <b>Treatment Village Definition</b>  | <b>HHs Reporting Participation in Any Nutrition Program</b>     |                           |                          | <b>Only HHs Reporting Participation in SHOUHARDO III Programs</b>   |                           |                          |
|--------------------------------------|---|---------------------------|--------------------------|---|---------------------------|--------------------------|
| <b>Comparison Village Definition</b> | <b>HHs Reporting Not Participating in Any Nutrition Program</b> |                           |                          | <b>HHs Reporting Not Participating in Any SHOUHARDO III Program</b> |                           |                          |
|                                      | Propensity Score Matching                                       | Nearest Neighbor Matching | Coarsened Exact Matching | Propensity Score Matching   | Nearest Neighbor Matching | Coarsened Exact Matching |
|                                      | (1)   | (2)                       | (3)                      | (4)   | (5)                       | (6)                      |
| Treatment Effect on Stunting         | -0.011  | -0.012                    | 0.062                    | -0.024  | -0.037                    | 0.01                     |
| t-statistic                          | (0.73)  | (0.72)                    | (0.13)                   | (0.51)  | (0.24)                    | (0.76)                   |
| Observations                         | 1421  | 1421                      | 608                      | 1458  | 1458                      | 1048                     |

t-statistics in parentheses. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001. No asterisks indicate no statistically significant estimates.

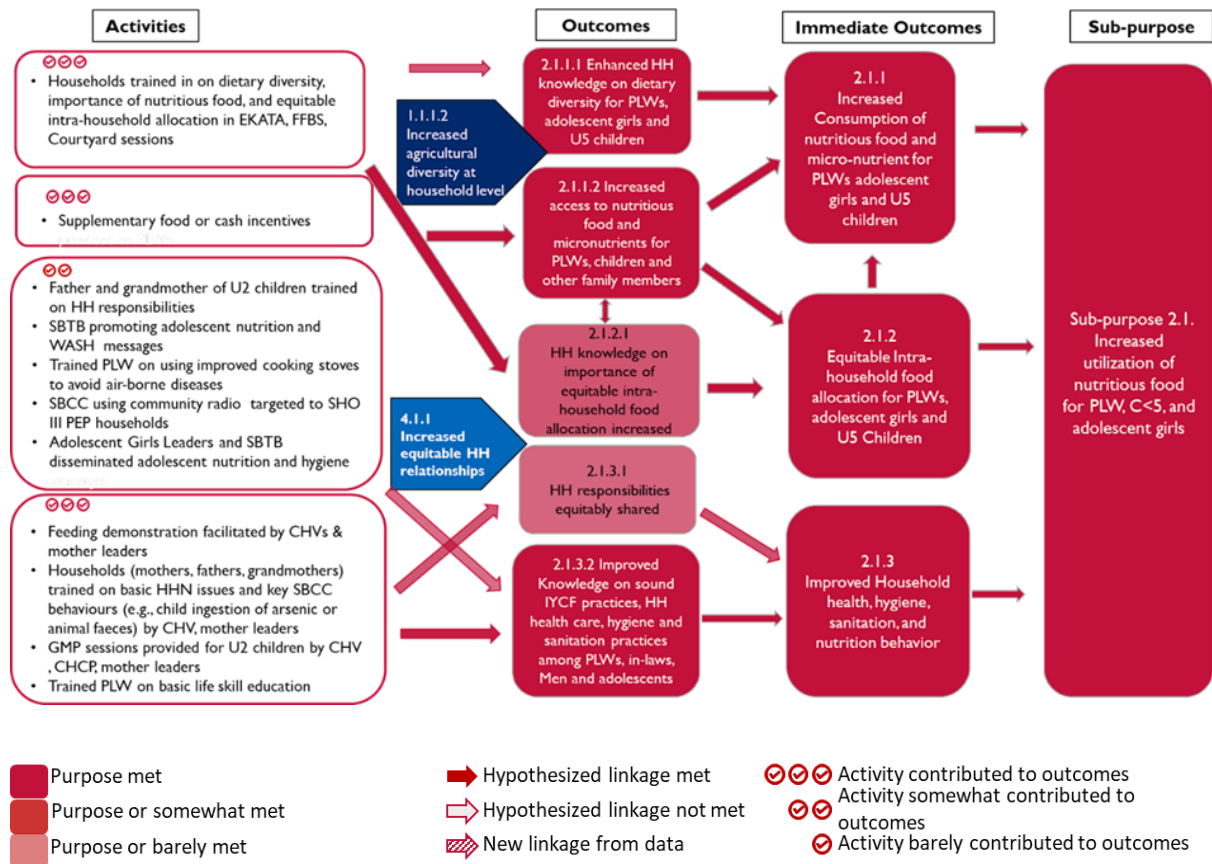
**Although the pre-post and impact evaluations suggest that there were limited impacts of the SHOUHARDO III program on women and children’s nutritional status (Purpose 2), the program appears to have had some effect on the sub-purposes to achieving this overall goal.** SHOUHARDO hypothesized that Purpose 2 would be achieved through three sub-purposes: (1) increased utilization of nutritious food for PLW, U5 children, and adolescent girls; (2) improved use of health and nutrition services by PEP household members; and (3) reduced-prevalence of water-borne diseases.

The sections below focus on each sub-purpose, using the pre-post evaluation to assess whether there was a change in each sub-purpose or underlying outcome, the impact evaluation findings to assess whether the SHOUHARDO III program causes these changes, and the qualitative performance evaluation to describe pathways of effective interventions and factors that contributed to these changes.

**SUB-PURPOSE 2.1: INCREASED UTILIZATION OF NUTRITIOUS FOODS BY PLW, CHILDREN U5, AND ADOLESCENT GIRLS**

As seen in Figure 3.17, increasing utilization of nutritious foods was the first strategy, or sub-purpose, for achieving Purpose 2 of improving the nutritional status of PLW, U5 children and adolescent girls. Three immediate outcomes facilitated this strategy.

Figure 3.17: Activities and Outcomes Leading to Increased Utilization of Nutritious Food for PLW, U5-Children, and Adolescent Girls (Sub-Purpose 2.1) (RQ1.2)



### OUTCOME 2.1.1: INCREASED CONSUMPTION OF NUTRITIOUS FOOD AND MICRO-NUTRIENTS FOR PLWs, ADOLESCENT GIRLS AND U5 CHILDREN

The first prioritized outcome for realizing Sub-Purpose 2.1 was increased consumption of nutritious food and micro-nutrients for PLWs, adolescent girls and U5 children. The consumption of nutritious foods and micro-nutrients is an important determinant of nutritional status, with evidence suggesting a link between dietary diversity and underweight, stunting, and wasting (Arimond and Ruel 2004). We first discuss the consumption of nutritious foods among women and subsequently among U5 children, relying on findings from the pre-post evaluation, qualitative performance evaluation, and impact evaluation.

### PREGNANT AND LACTATING WOMEN

To quantitatively measure women’s dietary adequacy, the research team used the woman’s minimum dietary diversity (MDD-W) indicator. This indicator defines an adequately diverse diet for a woman as the consumption of at least 5 out of 10 mutually exclusive food groups in the past 24 hours. These food groups include everything from dairy products to grains, and roots and tubers to vegetables. If a woman consumed 5 or more of these food groups, the woman is considered to be consuming a minimum dietary diversity.

**Findings from the pre-post evaluation suggest that there were small improvements in women’s dietary diversity between baseline and endline.** As shown in Figure 3.18, the share of women consuming a minimally diverse diet increased by 1% between baseline and endline.

Figure 3.18: Pre-post Analysis - Changes in Women’s Dietary Diversity (RQI.2)

### Percentage of women consuming a minimally diverse diet



**Findings from the impact evaluation likewise show improvements in the share of women consuming a minimally diverse diet, and that the SHOUHARDO III program led to these improvements.** Specifically, there was a five-percentage point difference in SHOUHARDO III villages relative to the comparison villages (a 13% improvement over the comparison village share of 38%) as seen in Figure 3.19.

Figure 3.19: Impact Evaluation Analysis - Women (15-49) consuming a minimally diverse diet in comparison and SHOUHARDO III Villages<sup>28</sup> (RQI.2)

### Percent of women (15-49) consuming minimum dietary diversity



**Our qualitative findings in best-case scenario villages reveal four main facilitators of improved nutrition behaviors among women: (1) increased knowledge on the benefits of dietary diversity, (2) increased access to nutritious food through food rations or cash stipends, (3) increased engagement in food production and livestock cultivation and (4) equitable decision-making within households.** We look at each more closely below.

**Qualitative participants attributed the adoption of positive nutrition practices to improved knowledge within communities gained through behavior change communication and outreach activities.** The most pervasive change in nutritional knowledge reported following these activities was around the importance of mothers and children consuming diverse diets, which consisted of milk, eggs, vegetables, fish, meat, and other protein-rich foods, according to participants.

**The majority of qualitative participants reported that cash and in-kind transfers provided by SHOUHARDO III facilitated the consumption of diverse and nutritious foods by making them more affordable.** Participants indicated that PLW received monthly food rations (consisting of maize, oil and pulses) and supplements to improve their overall nutrition. SHOUHARDO III also had personnel employed who monitored the growth and development of

<sup>28</sup> This figure reflects adjusted means which are adjusted for all of the covariates in the regressions for each outcome.

PLW to encourage sustainability. Amongst the households that received the monthly food rations, participants reported consuming a wider variety of foods per meal (average of 3). Households which did not receive the nutritional supplements often received a monthly stipend which they used to buy nutritional food.

**Participants in best case scenario villages highlighted the increased availability and accessibility of vegetables and animal-source food for consumption due to adopting homestead food production practices as a third facilitator of improved nutrition behaviors.** Specifically, participants explained that they no longer had to spend money on nutritious foods from markets. Some participants also described using income from selling surplus vegetables, livestock, and livestock products to purchase additional nutritious foods for mothers and children.

Improved birth weight of infants and reduced maternal mortality were some of the positive outcomes reported by participants from increased consumption of nutritious food by PLW. One female focus group member shared,

*“Before the start of SHOUHARDO, I gave birth to a child who weighed around 2 kg (4.4lbs). And I gave birth to a child after their intervention, and the baby weighed 4.2 kg (9.2lbs).” (FFG13\_FX)*

### **Children under five years old**

To quantitatively measure the dietary adequacy of children under five, the research team used two indicators: exclusive breastfeeding for children under six months and minimum acceptable diet (MAD). Children who are not exclusively breastfed are often given water, other milk, and other complementary foods. In comparison, exclusive breastfeeding is where an infant exclusively receives breast milk for the first 6 months and then adds solid and semi-solid foods after that age. This is an encouraged practice for infants and young child feeding (IYCF), as it is correlated with lowered infection risk, decreased infant mortality, long-term improvement in cognition, and stronger immune responses (--WHO, 2021b). After 6 months, caregivers are recommended to start introducing complementary foods to their child’s diet. While breastfeeding can supplement a child’s diet up until the age of two, children should continue to increase the variety and number of foods they consume alongside breast milk as they age (UNICEF, 2019). MAD is calculated by adding dietary diversity (nutrient density proxy) and feeding frequency (representing energy density) (INDDX, 2018). SHOUHARDO III targeted this positive practice as the introduction of complementary foods before 6 months (which is not recommended) was common in treatment areas.

### **Exclusive Breastfeeding**

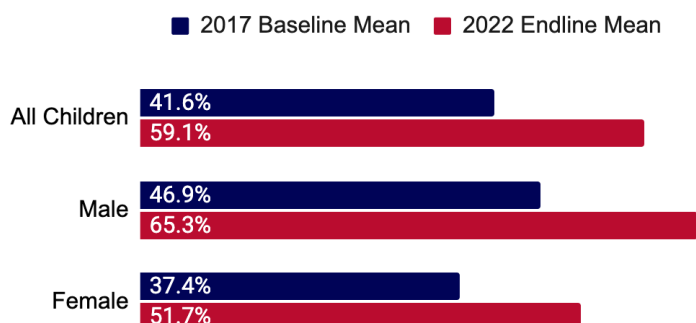
**Compared to children at the beginning of the SHOUHARDO III program, the share of children at the end of the program exclusively breastfed for the first six months increased.** At endline, 59.1% of children were exclusively breastfed for the first 6 months which is an increase from baseline where 41.6% of children were exclusively breastfed for the first 6 months (Figure 3.20).



Figure 3.20: Pre-Post Analysis - Changes in exclusive breastfeeding from baseline to endline (RQ1.2)

### Prevalence of exclusive breast-feeding of children under six months of age

Percent of children



### Minimum Acceptable Diet

**According to the pre-post evaluation, the number of children receiving a MAD has increased from 17.8% at baseline to 46.0% at endline.** Survey respondents at endline reported feeding their U5 children diverse diets that consisted of at least three different food groups: grains, roots, and tubers (90.5%), other fruits and vegetables (47.9%), and flesh foods (meat, poultry and fish) (43.5%). Children aged 6 to 24 months were fed on average 3.32 times a day in the treatment areas at endline, slightly less than the recommended feeding frequency (WHO 2011).

**Qualitative participants in best case scenario villages perceived that the increase in the adoption of positive nutrition- and health-related practices for children, were due to cash and in-kind transfers, SHOUHARDO III nutrition trainings, and regular growth monitoring.** Improved nutrition practices included exclusive colostrum feeding immediately after birth, exclusive breastfeeding until six months, and introducing mashed supplementary nutrition (vegetables, fruits, rice) from 6 months onwards.

**The majority of respondents in best-case scenario villages credited improved consumption of nutritious food to improved access to diverse, nutritious foods and micronutrients through monthly supplemental food (pulses, oil and maize) or cash incentives of 500 taka (\$5.28) supplied through SHOUHARDO III.** This strategy targeted households with PLW, and food or cash rations were provided from three months of pregnancy up to three years post-delivery to increase access to nutritious food and combat malnutrition amongst PLW and U5 children.

**Training sessions on the importance of dietary diversity also contributed to increased consumption of nutritious food as respondents noted a marked reduction in households consuming poor and borderline diets due to behavior change in nutrition practices.** For households with U5 children, changes included infants receiving colostrum upon delivery, exclusive breastfeeding of infants for six months, and the introduction of healthy supplemental foods for infants after the sixth month. Respondents reported that these changes led to reduced malnutrition among U5 children. Among other households including households with adolescents, respondents credited SHOUHARDO III for training that increased their knowledge on dietary diversity and they reported increasing their consumption of nutritionally diverse foods. One respondent noted,

*“Now we eat different items for breakfast, lunch, dinner like lentils, eggs, and vegetables. But in the past, it was like eating different items of potato three times a day.” (FFG4\_FX)*

**Among some households that received the monthly cash incentives of 500 taka (\$5.28), respondents noted increased agricultural diversity,** as they used these funds to cultivate crops and rear livestock (an outcome supported by Purpose 1 activities). Many respondents noted that cultivating their own crops and rearing livestock improved their access to nutritious foods as well as income, a cross-purpose synergy.

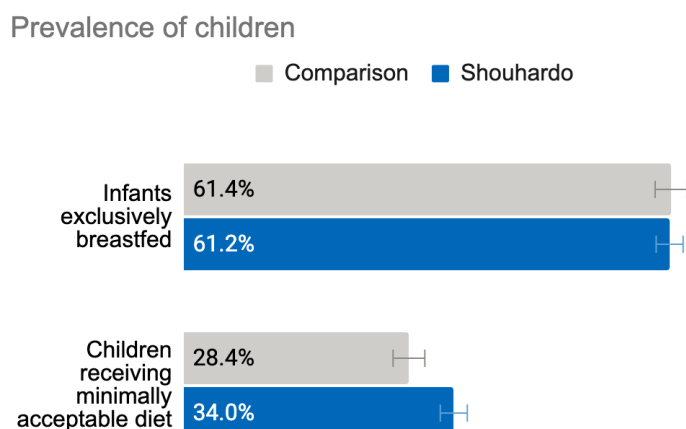
*“Previously, we didn’t rear goats, but now we rear goats. Then cultivate vegetables now, which we consume. We don’t have to buy any now.” (FYFG1\_F5)*

*“Now people consume a diversity of foods. But previously they consumed only one item, like vegetables. Now they cultivate different types of vegetables. They sell those as well as consume those.” (CL\_M1)*

Findings from our qualitative evaluation in best-case scenario villages also suggest that health-seeking behavior and nutrition practices were mutually reinforcing. Community members and community leaders noted that the benefits of growth monitoring encouraged women to consume and feed their children nutritious and diverse foods. The positive impacts on their health, in turn, encouraged women to continue participating in growth monitoring. Participants explained that they were able to track and witness the progress of their children’s growth. They fed them more if they were underweight, continued to feed them nutritious foods if they were a healthy weight, and returned to health facilities for regular growth monitoring.

**Findings from the impact evaluation suggest that the SHOUHARDO III program might have improved the dietary diversity of infants and young children, but not exclusive breastfeeding for children under six months.** Figure 3.21 lays out these impacts, which align with the findings from the pre-post and qualitative evaluations. We find meaningful impacts of between 2.0 percentage points and 7.3 percentage points, with the average estimate being a five-percentage point higher share of children receiving a MAD (Figure 3.21). However, these estimates are not statistically significant under most specifications, suggesting caution in interpreting these results as they could be due at least in part to random factors in the sampling process for the evaluation.

Figure 3.21: Impact Evaluation Analysis - Children under 5 receiving a minimum acceptable diet (MAD) and infants under 6 months exclusively breastfed (RQI.2)<sup>29</sup>



At the same time, it does not appear that the SHOUHARDO III program caused an increase in the share of infants who are exclusively breastfed (although the sample of infants in our data is small). As seen in Figure 3.21, rates of both of these outcomes were statistically indistinguishable for program and comparison villages. The pre-post and qualitative performance evaluations found improvements in exclusive breastfeeding at the end of the program. However, because these improvements were seen in both the SHOUHARDO III treatment villages and comparison villages, we cannot confidently attribute these results to the SHOUHARDO III program.

#### OUTCOME 2.1.2: EQUITABLE INTRA-HOUSEHOLD FOOD ALLOCATION FOR PLWs, ADOLESCENT GIRLS AND U5 CHILDREN

The second immediate outcome was equitable intra-household food allocation for PLWs, adolescent girls and U5 children. Respondents attributed increased access to nutritious food as well as increased knowledge about equitable food allocation for a reduction in malnutrition among U5 children, PLW, and adolescent girls. Respondents reported that prior to SHOUHARDO III, male household members ate first, and were often prioritized in the allocation of nutritious foods. For example, among PEP households, the protein allocation in the form of fish, meat or eggs was often given only to the male members of the household, which left the female household members vulnerable to malnutrition. This dynamic greatly disadvantaged PLW and adolescent girls, who often ate last, and had higher nutritional needs for minerals such as iron. To reduce iron deficiency amongst PLW and adolescent girls, SHOUHARDO III provided iron supplementation, which they allotted to households with adolescent girls & PLW. After learning about the importance of equal food allocation, respondents reported that households were now more likely to share meals together and ensure equal allocation of nutritional foods. One male focus group member noted,

*“Previously, they [gave] more [food] to the male members than the female members of the family. But they don’t do this anymore and distribute foods and other things equally to both male and female members. For example, in the school...mothers took more care of their sons than daughters, but now they treat both son and daughter equally.” (MFGI\_M4)*

According to a male focus group participant:

<sup>29</sup> This figure reflects adjusted means which are adjusted for all of the covariates in the regressions for each outcome.

“Previously, there was a trend that gave more to husbands, sons and gave less to daughters. But now they distribute foods equally because everyone needs nutrition. If someone eat less, then they will have a nutritional deficit. That’s why we distribute the foods equally now.” (MFGI\_M4)

And a female community member noted:

“Previously, many mothers gave more food to their sons than their daughters; like gave two pieces of fish to her sons and one piece of fish to her daughters. But now we don’t do this because they are equal. Both have the same rights.” (FFG2\_FX)

### **OUTCOME 2.1.3: IMPROVED HOUSEHOLD HEALTH, HYGIENE, SANITATION AND NUTRITION BEHAVIOR**

The third immediate outcome was improved household health, hygiene, sanitation and nutrition behavior. Qualitative participants attributed SHOUHARDO III sessions that gave basic life skills education and trainings as factors that contributed to improved behaviors in household health, hygiene, sanitation and nutrition. The majority of participants reported an improvement in handwashing behaviors due to training on the critical times for handwashing (for example, before and after meals, and after using the toilet) and noted a decrease in hygiene related illnesses such as diarrhea. Findings from the pre-post evaluation also show a large increase in the share of households having a handwashing station with soap in their households (Figure 3.22), which may have also contributed to increased handwashing.

Figure 3.22: Pre-post Analysis - Percentage of households with soap and water at a handwashing station commonly used by family members (RQI.2)

Percentage of households with soap and water at a handwashing station



Respondents also reported de-stigmatization of menstrual care and improved awareness of health and hygiene practices for adolescent girls due to SHOUHARDO III’s training on basic hygiene and social and behavior change communication (SBCC). Since receiving the training, respondents reported that they now provide adolescent girls with folic and iron supplements, which helps them maintain good health. Respondents also reported an increase in purchasing sanitary pads as they gained knowledge on the importance of maintaining good hygiene.

**Respondents credited SHOUHARDO III training on health and hygiene with contributing to a decrease in teen-pregnancy and marriage.** In some villages, respondents noted a reduction in early marriages and subsequently early childbearing due to the training. One focus group member summarized new ideas this way.

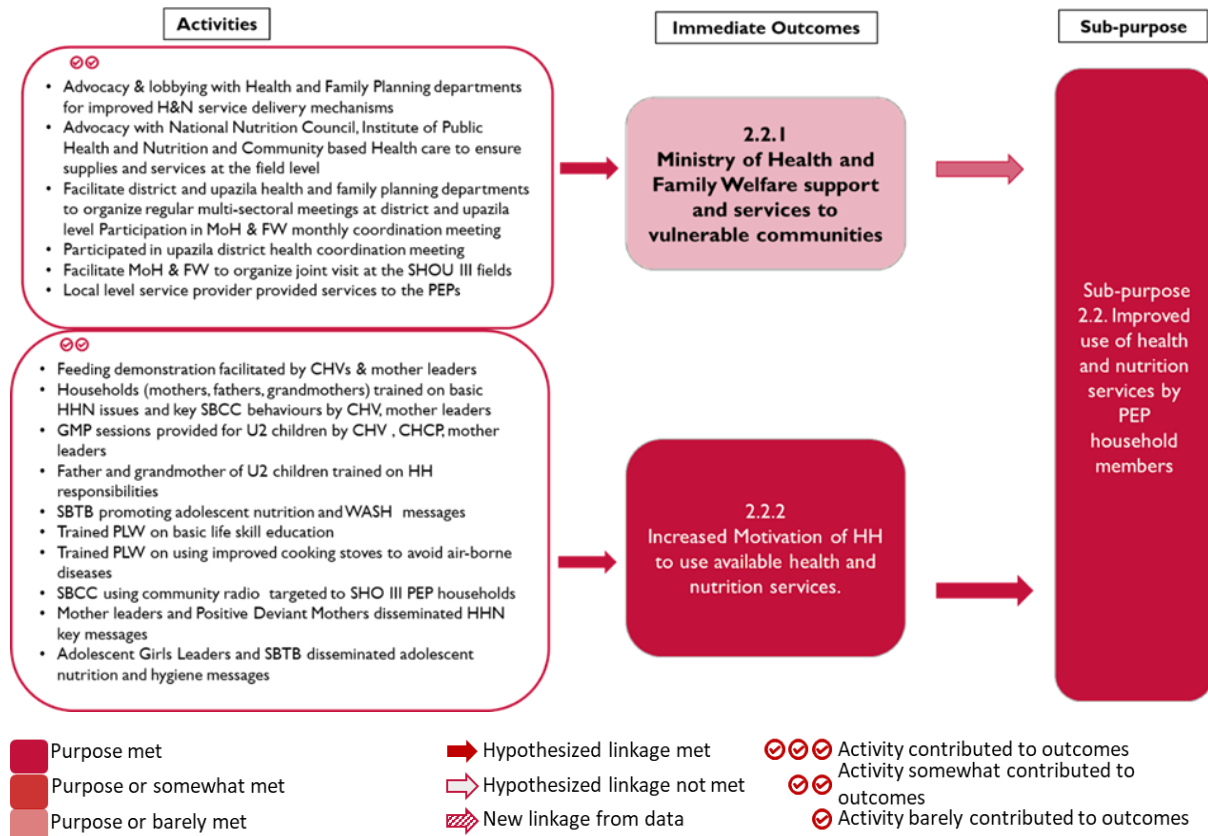
“If we marry off a girl before she reaches 18 years of age, then she may have many health problems...and if she gives birth early, then many problems can arise from early conception and birth...For these reasons, we take an oath not to marry our girls at an early age.” (FFGI\_FX)

### **SUB-PURPOSE 2.2: IMPROVED USE OF HEALTH AND NUTRITION SERVICES BY PEP HOUSEHOLD MEMBERS**

As seen in Figure 3.23 below, the second strategy (Sub-Purpose 2.2) employed to improve nutritional status of PLW, U5 children and adolescent girls was improving the use of health and

nutrition services by PEP household members. The research team hypothesized that this strategy would occur through the achievement of two immediate outcomes, which we discuss below.

Figure 3.23: Activities and Outcomes Leading to Improved Use of Health and Nutrition Services by PEP Household Members (RQI.2, Sub-Purpose 2.2)



**OUTCOME 2.2.1: MINISTRY OF HEALTH AND FAMILY WELFARE’S SUPPORT AND SERVICES TO VULNERABLE COMMUNITIES ENHANCED (E.G. REFERRAL MECHANISMS, MONITORING, FUNCTIONING SEVERE ACUTE MALNUTRITION AND INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS CORNER)**

Findings from the pre-post evaluation show that access to government primary health care and antenatal care services increased for women and children after the SHOUHARDO III program.

**Access to Primary Health Care Services**

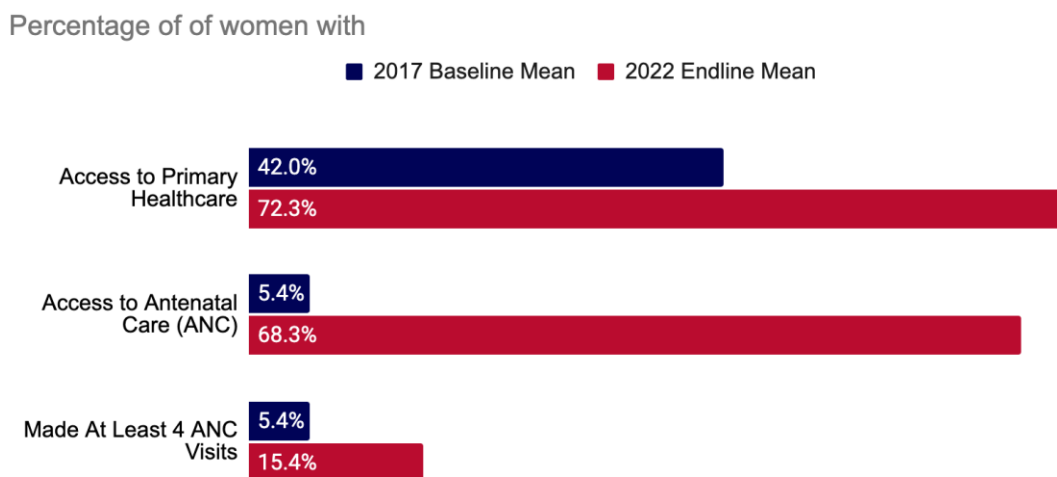
Primary health care (PHC), is available from many different providers including the public sector (Ministry of Health and Family Welfare), non-government organizations (NGOs), and for-profit private providers. Over 12,000 functional community clinics provide primary care across Bangladesh. Services are available at the community level as well as at more specialized health centers (Asia Pacific Observatory on Health Systems and Policies, 2015).

**At endline, we found a large improvement in access to government primary health care services.** In the treatment areas at endline, 72.3% of all women aged 15-49 reported having access to at least one government primary healthcare service, which is much higher than baseline where only 42% of women reported having access to at least one service (Figure 3.24). We see increases across all primary health services including great increases in iron, folic acid, and vitamin A supplementation, medication and deworming, and child health care services.

Increased access to antenatal care services especially stand out. Availability of antenatal care during a woman’s pregnancy can help address any possible pregnancy complications and lower the risk of adverse outcomes. Women from higher socioeconomic statuses are three times more likely to receive antenatal care from a medical professional in Bangladesh than women from lower socioeconomic statuses putting poorer pregnant women and their babies at risk (Asia Pacific Observatory on Health Systems and Policies, 2015).

**At endline, women had greater access to antenatal care than at baseline. 68.3% of women reported having access to antenatal care at endline compared to just 5% at baseline (Figure 3.24).** Additionally, 15.4% of women reported having four or more antenatal care visits for their most recent pregnancy that resulted in a live birth. This is more than three times higher than baseline where 5% reported access to antenatal care and 5% of women reported receiving at least four antenatal care visits.

Figure 3.24: Pre-Post Analysis- Percentage of women’s with access to healthcare services (antenatal care and overall healthcare services) (RQ1.2)



Qualitative participants from best-case scenario villages attributed the increase in the use of health and nutrition services to three main factors. (1) improved access to healthcare providers (at home or in community clinics) (2) free nutritional food and supplements, (3) knowledge of services offered by SHOUHARDO III. Prior to SHOUHARDO III, many households reported having limited access to healthcare due to lack of local hospitals and clinics. These challenges especially impacted pregnant women who were unable to access adequate care. Since SHOUHARDO III, many participants reported motivation to use health and nutrition services due to the convenience of having healthcare providers visit them at home and more clinics and trained health officials (including midwives) within their villages. Amongst the majority of participating households, putsi (nutrition) was the most commonly accessed service, followed by services for pregnant women and young children such as prenatal care and growth monitoring. According to one community leader, these changes had a positive impact on the community.

*“Pregnant women had to face a lot of problems in our area...but now after training, discussion sessions from SHOUHARDO, they are much more aware now. As far as I know, there is a trained midwife in the community who received training from SHOUHARDO.” (CL\_M2)*

To improve the use of health and nutrition services by PEP households, SHOUHARDO III aimed to enhance the Ministry of Health and Family Welfare's (MOH&FW) support and services to vulnerable communities. The activities to reach this immediate outcome as outlined in Figure 3.23 involved SHOUHARDO III facilitating MOH&FW joint visits to the intervention villages. **While respondents in best-case scenario villages reported improved use of health and nutrition services, our research did not detect evidence to support that this change came from enhanced support or services from MOH&FW.** The lack of evidence in this case could be due to respondents not being aware of MOH&FW's work in the area, which makes it difficult to interpret the absence of data in this case.

**Findings from the impact evaluation indicate that women's access to healthcare services improved, at least in part from the SHOUHARDO III program.** These findings support the pre-post and performance evaluation. Women in SHOUHARDO III treatment villages were four percentage points more likely to receive at least four antenatal care visits during their most recent pregnancy (a 28% improvement over the 14% of women who do so in comparison villages).

#### **OUTCOME 2.2.2: INCREASED MOTIVATION OF HOUSEHOLDS TO USE AVAILABLE HEALTH AND NUTRITION SERVICES**

The second immediate outcome contributing to the improved use of health and nutrition services was increased household motivation to use available health and nutrition services. Respondents in best-case scenario villages reported that they were motivated to seek health services especially for PLW.

In one village, households reported frequently going for checkups. They also noted that SHOUHARDO III advocacy inspired community members to take the initiative to buy a van to provide transportation for PLW to their checkups. One resilient household member in that village stated,

*"We bought a van at 5500tk for the community clinic to carry the pregnant women with our funds." (RH\_M9)*

**Additionally, households were incentivized through the healthcare, hygiene and nutrition (HHN) training to seek out healthcare services such as growth monitoring of PLW and infants by the frequent distribution of free *putsi* (nutrition packets) at the community health clinics.** Free medication distributed at community clinics also motivated PEP households to seek healthcare services. As one respondent put it,

*"People didn't know that they could get medicine free from the community clinic. Only a handful of educated people knew about it. The aged people didn't know about it. Now, they know about it and go there." (RH\_F2)*

The majority of participants reported positive attitudes towards the sustainability of these changes as they had perceived benefits such as improved maternal mortality due to the interventions. In an all-female focus group, one participant noted,

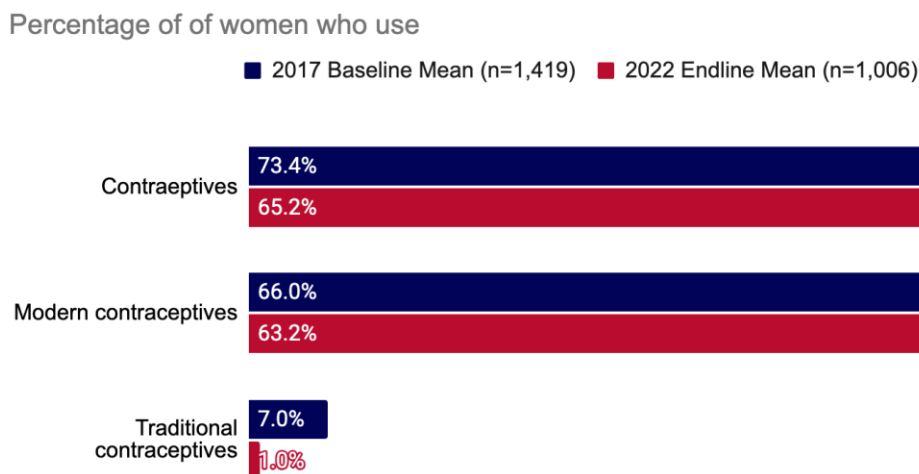
*"Now, the death rate is almost zero. Previously, no one cared that much [about] pregnant women. Since the start of SHOUHARDO, everyone cares [about] the pregnant woman and the baby. That's why both of them remain healthy." (FFG2\_FX)*

A male focus group echoed this sentiment, when one respondent stated,

“Maternal death was quite high in the past. But now it has been reduced a lot. Almost to zero.”  
(MFG2\_M8)

**However, our pre-post data does show a decrease in contraceptive use prevalence after SHOUHARDO III, despite motivation to seek other health services.** The reported use of contraceptives among married women aged 15-49 slightly declined from 73.4% at baseline to 65.2% at endline. At endline, women are much more likely to use modern contraceptive methods than traditional methods, with birth control pills being the most commonly used contraceptive method (Figure 3.25).

Figure 3.25: Pre-Post Analysis - Women’s Use of Contraceptives at Endline (RQ1.2)



### SUB-PURPOSE 2.3: REDUCED PREVALENCE OF WATER-BORNE ILLNESSES

#### Water, Sanitation, and Hygiene

The third strategy (sub-purpose 2.3) for improving the nutritional status of PLW, U5 children and adolescent girls was through reducing the prevalence of water-borne illnesses. Unsanitized and unmaintained water sources can expose communities to dangerous chemicals and numerous diseases including cholera, typhoid, polio, and other diarrheal diseases. Inclusive WASH practices have been known to decrease this risk. In 2014, the WHO documented that improved water sources can lower diarrhea incidents by up to 37.5%, for example.

At times, WASH strategies can overlook the critical issue of chemical toxins in water sources (Kearns 2020). In Bangladesh, a comprehensive WASH strategy that incorporates minimizing toxic chemical exposures is especially critical, as alarming amounts of arsenic can be found in drinking water. The Government of Bangladesh found that over 12% of the population consumes water that exceeds the national standard for safe water (2018). They also observed that the rate of arsenic contamination in drinking sources was more than three times higher in the nation’s poorest populations (ibid.). Over time, arsenic can increase an individual’s risk of developing cancer of the skin, lungs, bladder, and kidney. Overall, WASH-related issues account for 8.5% of total deaths in Bangladesh (UN-Water, 2013).



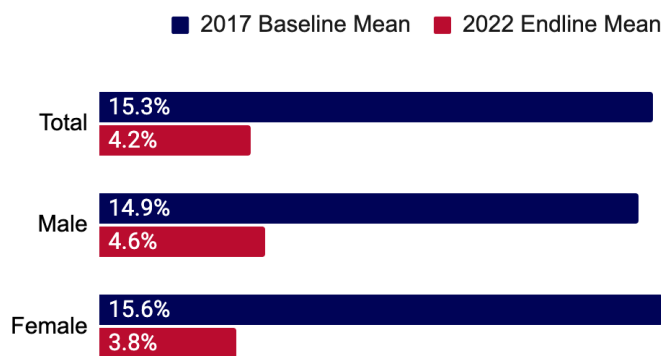
For this evaluation, the research team focused on one water-borne disease: diarrhea. Diarrheal disease is the second leading cause of death among young children. Every year about 525,000 children under the age of five die due to diarrhea worldwide (WHO, 2017). Frequent diarrhea can lead to deficiencies in nutrients that are necessary for proper growth and development, which can result in stunting and general malnutrition.

### Children’s Diarrhea

**The pre-post evaluation demonstrates that the rate of diarrhea has decreased since the baseline, indicating overall improvement in children’s health.** As shown in Figure 3.26, the percentage of children with diarrhea in the last 2 weeks dropped from 15% at baseline to 4.2% at endline, with similar declines between boys and girls.

Figure 3.26: Pre-post Analysis - Percentage of Children under Five with Diarrhea (RQ1.2)

Prevalence of children under age five with diarrhea in the last two weeks



**In contrast to the pre-post evaluation findings, the impact evaluation findings fail to detect an impact of the SHOUHARDO III program in terms of a decrease in the share of children who experienced diarrhea.** As Table 3.9 lays out, rates of both of these outcomes were statistically indistinguishable for program and comparison villages. Therefore, even though rates of diarrhea declined in SHOUHARDO III areas, the rate of decline was similar in comparison areas, suggesting that the program did not cause these improvements.

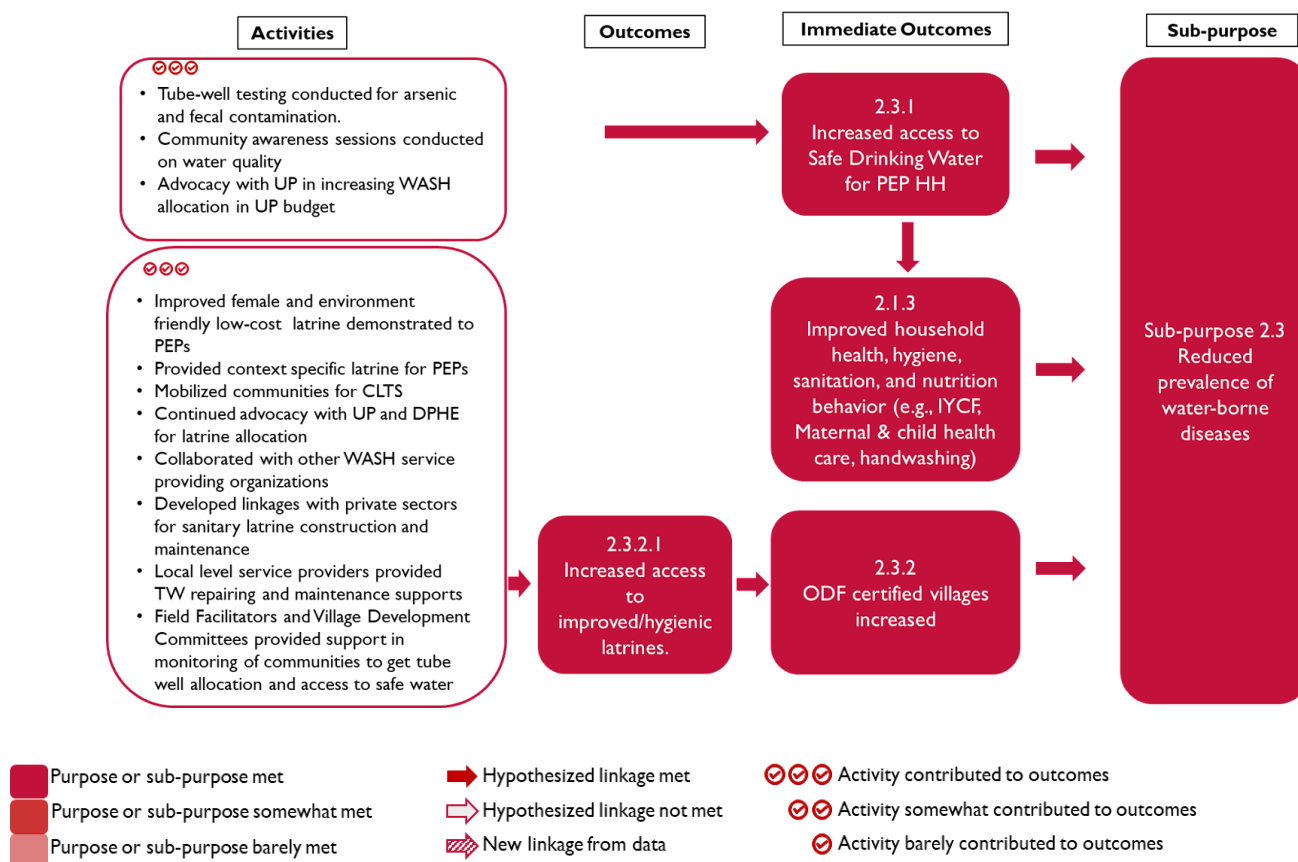
**Table 3.9: Impact evaluation results - Children under age 5 with diarrhea in the two weeks prior to the survey (RQ1.2)**

|                            | Regression Adjustment | Regression Adjustment | Propensity Score Matching | Kernel Matching | K-Nearest Neighbor Matching | Coarsened Exact Matching | Coarsened Exact Matching |
|----------------------------|-----------------------|-----------------------|---------------------------|-----------------|-----------------------------|--------------------------|--------------------------|
|                            | Base Covariates       | Full Covariates       | Full                      | Full            | Full                        | Base                     | Full                     |
|                            | (1)                   | (2)                   | (3)                       | (4)             | (5)                         | (6)                      | (7)                      |
| Child diarrhea             | -0.005                | -0.005                | -0.004                    | -0.003          | -0.005                      | -0.007                   | -0.007                   |
| <i>confidence interval</i> | [-0.017, 0.006]       | [-0.017, 0.006]       | [-0.023, 0.014]           | [-0.019, 0.014] | [-0.023, 0.013]             | [-0.024, 0.009]          | [-0.023, 0.010]          |
| <i>p-value</i>             | -0.35                 | -0.34                 | -0.64                     | -0.76           | -0.6                        | -0.38                    | -0.43                    |
| N                          | 2595                  | 2595                  | 2595                      | 2595            | 2595                        | 1835                     | 1835                     |

Even so, the research team used findings from both the pre-post and qualitative performance evaluations to elucidate some possible pathways for addressing diarrhea among children. The pre-post evaluation found that the use of Oral Rehydration Therapy (ORT) to treat children with diarrhea increased **from baseline 82.6% at baseline to 90.1% at endline**. There was a noticeably larger improvement for female children receiving ORT treatment compared to male children with female children improving by 10.3 percentage points and male children improving by 4.7 percentage points.

In addition to treatment of diarrhea with ORT, qualitative participants reported that SHOUHARDO III successfully prevented diarrhea via two immediate outcomes (see Figure 3.27), which we discuss below. We also discuss some cross-purpose support for attaining this sub-purpose from sub-purpose 2.1.

Figure 3.27: Activities and Outcomes Leading to Reduced Prevalence of Water-borne Diseases (RQ1.2, Sub-Purpose 2.3)



### OUTCOME 2.3.1: INCREASED ACCESS TO SAFE DRINKING WATER FOR PEP HOUSEHOLDS

The first immediate outcome was to increase access to safe drinking water for PEP households. Using findings from the pre-post and qualitative performance evaluations, the research team assessed access to safe drinking water in three ways: use of improved drinking water sources, use of water treatment technologies, and distance to improved water sources.

**Overall, the percent of households at endline using an improved drinking source has increased compared to baseline from 80.5% to 87.8%.** Not all water sources are created equal and can vary widely in quality, availability, and accessibility. “Improved” water sources are sources where the water is not affected by dangerous contaminants, specifically fecal matter, and the water source must be accessible year-round without delay of a day or longer over a two-week period (USAID, 2015). Improved water sources can be achieved through sources such as piped water, boreholes, protected wells/springs, and rainwater collection (BBS, 2014). Overwhelmingly, the most commonly used improved water source was a shallow tube well, with a deep tube well being the second most popular.

**Findings from the qualitative performance evaluation show that poor and extremely poor (PEP) households from best case scenario villages were able to access improved water sources, especially tube wells,** through SHOUHARDO III funding, local governments, or Village development committees (VDC’s). Qualitative participants reported that SHOUHARDO III helped construct tube wells, and also received tube wells from local governments, VDCs, and other NGOs.

Another strategy for improving drinking sources is to promote the use of water treatment technologies. These technologies include boiling, bleaching, filtering, and solar disinfection. **Although the pre-post evaluation suggests an increase in the use of water treatment technologies, the share of households using these technologies remained low at endline.** The use of such technologies increased slightly from 0.9% at baseline to 1.4% at endline.

**Qualitative participants in best case scenario SHOUHARDO III program areas reported adopting water treatment technologies after receiving knowledge on water safety from the program.** This reportedly included the harmful effects of arsenic and using water from wells with a non-concrete base during flooding season. Additionally, participants also reported acquiring knowledge on a variety of ways to ensure water safety such as regular testing of tube wells for arsenic contamination, filtering water for iron contamination, and boiling water or using water purifying tablets to remove parasites and bacteria. For easy identification, wells with arsenic contamination were marked red or with a cross, while safe wells were marked green. One respondent noted,

*“Because of drinking arsenic contaminated water, some people in our area fall ill to a disease that we named ‘Gak.’ Then we face some skin-related problems. But there is no prevalence of this now. We are aware now.” (FFGI\_F2)*

Figure 3.28: A SHOUHARDO III Participant Filters Water to Remove Iron (RQI.2)



Respondents from the qualitative performance evaluation reported that improved knowledge from SHOUHARDO III on water quality led to a reduction in water borne diseases such as diarrhea, cholera and stomach issues. Respondents reported that

SHOUHARDO III training led to improved household hygiene and sanitation behavior (sub purpose 2.1.3) through the adoption of filtering and boiling water, and this also led to a reduction in water borne illnesses. As one respondent noted,

*“Previously, we fell sick regularly. Now, there aren’t many outbreaks of cholera, diarrhea.”*  
(FFGI\_FX)

**Despite improvements in water sources and adoption of water treatment technologies, evidence from the pre-post evaluation suggests that water accessibility remains a challenge.** Another important aspect of WASH strategies is to make sure households can access water within a 30-minute round trip. This ensures households obtain enough water on a regular basis to meet their household needs. **The share of households who were able to access improved and unimproved water sources within a 30-minute round trip increased between baseline and endline (Figure 3.29).** At baseline, 98.3% of households reported they could access water within 30 minutes which is higher than endline. At endline, this increased to 99.8% of households.

Figure 3.29: Pre-Post Analysis - Percentage of households that can obtain drinking water in less than 30 minutes (round trip) (RQ1.2)

Percentage of households that can obtain drinking water within a 30 minute round trip



**Some water testing service providers also reported hesitancy among some households to use their services due to the 250Tk (approximately \$2.63) cost.** The prevailing reason given was that other households had received these services from SHOUHARDO III or the government free of charge. One service provider shared how he convinces hesitant households to test the water.

*“Many don’t want to pay for it, by saying that SHOUHARDO can do it without any charge. Then, I have to motivate them, why they need to test the water, what are the effects of drinking arsenic contaminated water. Then, they understand these and don’t create any problems.”* (SP\_F2)

#### **OUTCOME 2.3.2: OPEN DEFECATION FREE-CERTIFIED VILLAGES INCREASED**

The second immediate outcome for sub-purpose 2.3 was increasing the number of open defecation free (ODF) certified villages. SHOUHARDO III aimed to achieve this goal primarily through the promotion of improved sanitation facilities. Communities can suffer from many health detriments as a result of unhygienic sanitation infrastructure. They face the risk of contracting diarrheal diseases, increasing contact with disease-carrying vectors, and suffering from parasitic infections. “Improved sanitation” facilities can help prevent these outcomes. In order to meet this standard, individual households must have distinct toilet facilities that securely separate waste products from human contact. Examples of improved sanitation facilities include flush or pour-flush toilets as well as pit latrines (UNICEF and WHO, 2020).

**Findings from the pre-post evaluation show that open defecation decreased for households in the SHOUHARDO III villages at endline.** Open defecation was nearly non-

existent after the SHOUHARDO III program (Table 3.13). At baseline 4.9% of households reported practicing open defecation which decreased to 0.7% at endline.

**The majority of participants reported that SHOUHARDO III played a role in transforming their villages to ODF status by increasing access to hygienic latrines.**

Indeed, the pre-post evaluation likewise found that the share of households using an improved sanitation facility more than tripled between baseline and endline (Figure 3.30). The most common improved sanitation facilities used in the treatment are pit latrines with a slab (82.1%) followed distantly by a flush to septic tank (7.6%) and flush to pit latrine (6.0%) .

Figure 3.30: Pre-post Analysis - Households Using an Improved Sanitation Facility (RQ1)

Percentage of households using improved sanitation facilities



**Many respondents from the qualitative performance evaluation credited SHOUHARDO III as well as other WASH service providing organizations for constructing and sensitizing the community about the importance of hygienic latrines.**

Participants reported learning about the benefits of sanitary latrines in disease prevention through sensitizations from SHOUHARDO III. These changes led to a gradual eradication of using latrines in open places. Since the intervention, many reported that sanitary latrines have promoted a clean and smell-free environment around their home. Other village groups encouraged and incentivized members to construct latrines as a condition to receive further SHOUHARDO III benefits and maintain their membership. One community leader noted: “People didn’t have sanitary latrines in our community in the past. After the intervention of SHOUHARDO, almost every household has constructed a sanitary latrine.” (CL\_M1)

Households obtained **these latrines with support from multiple sources**. The respondents indicate that their households now had sanitary latrines which were either constructed or provided by SHOUHARDO III, NGO’s like Char Livelihoods programme (CLP) or by the households themselves amongst those financially capable. SHOUHARDO III was especially instrumental in creating and facilitating links for village development committees with government services, which enabled households to obtain the latrines from union parishads. As one respondent reported,

*“We got the latrine from the union parishad. SHOUHARDO showed us how we can collect these from the union parishad.” (RH\_M9)*

To account for topographical, geographical and financial challenges faced by PEP households without sanitary latrines, SHOUHARDO III developed context-specific latrines. For example, SHOUHARDO III provided diversion chambers – which allow waste to be diverted into deeper pits – to households in areas with shallow bedrock that made it difficult to construct deep latrines, or in flood prone areas. SHOUHARDO III provided bamboo latrines as a modified latrine among households that were unable to afford concrete slabs. One respondent stated,

*“Previously, we used an open toilet, which we built with bamboo and covered the place with some covering. After SHOUHARDO’s intervention, we learned about the sanitary latrine, but we couldn’t*

afford that kind of sanitary latrine. So, we build it by using bamboo, slabs and other materials. We clean it with soap water if it gets dirty.” (FFG3\_FX)

**By adopting sanitary latrines, many respondents from villages where program implementation was strongest reported that they were now ODF certified and that they noted a decrease in diseases such as diarrhea and cholera and fecal related infections, the aim of this sub-purpose.** However, this decline in diarrhea may not be solely due to the SHOUHARDO III program, as the impact evaluation found no significant differences in diarrheal rates between intervention and comparison areas. It could also be that the best case scenario villages had better results than other SHOUHARDO III villages from the interventions, given they are villages with the strongest and most complete implementation and especially engaged community members.

## INDICATOR TABLES FOR PURPOSE 2

**Table 3.10: Food Security Indicators (RQ1)**

| Indicator  | Baseline value    | Endline value     | Raw Difference (Baseline-Endline) | SD of BL value | SD of EL value | P value of difference |
|--|-------------------|-------------------|-----------------------------------|----------------|----------------|-----------------------|
| Prevalence of households with moderate or severe hunger (HHS)  | 9.6<br>n = 1,838  | 2.4<br>n = 1,188  | -7.2                              | 29.5           | 15.3           | 0.000***              |
| Male and female adults   | 8.1<br>n = 1,585  | 1.5<br>n = 1,088  | -6.6                              | 27.3           | 12.0           | 0.000***              |
| Adult female, no adult male                                    | 20.5<br>n = 218   | 10.8<br>n = 93    | -9.7                              | 41.5           | 31.3           | 0.025*                |
| Adult male, no adult female                                    | 8.7<br>n = 34     | NA                | NA                                | 26.4           | NA             | NA                    |
| Child, no adults   | NA                | NA                | NA                                | NA             | NA             | NA                    |
| Food consumption score (FCS)                                   | 54.1<br>n = 1,838 | 57.3<br>n = 1,188 | 3.2                               | 19.6           | 17.2           | 0.000***              |
| Percent households with FCS ≤ 28 (Poor)                        | 6.9<br>n = 1,838  | 1.7<br>n = 1,188  | -5.2                              | 25.4           | 12.9           | 0.000***              |
| Percent households with FCS > 28 and FCS ≤ 42 (Borderline)     | 25.1<br>n = 1,838 | 17.1<br>n = 1,188 | -8.0                              | 43.4           | 37.6           | 0.000***              |
| Percent households with FCS > 42 and FCS ≤ 52 (Acceptable Low) | 18.2<br>n = 1,838 | 22.7<br>n = 1,188 | 4.5                               | 38.6           | 41.9           | 0.003**               |
| Percent households with FCS > 53 (Acceptable High)             | 49.8<br>n = 1,838 | 58.6<br>n = 1,188 | 8.8                               | 50.0           | 49.3           | 0.000***              |

**Table 3.11: Women's Health Pre-Post Indicators Indicators**

| <b>Indicator</b>  | <b>Baseline value</b> | <b>Endline value</b> | <b>Raw Difference (Baseline-Endline)</b> | <b>SD of BL value</b> | <b>SD of EL value</b> | <b>P value of difference</b> |
|---|-----------------------|----------------------|--|-----------------------|-----------------------|------------------------------|
| Minimum Dietary Diversity - Women (MDD-W)   | 37.3<br>n = 1,843     | 41.5<br>n = 1,284    | 3.2                                      | 48.4                  | 49.1                  | 0.018*                       |
| Women's Dietary Diversity Score (WDDS)  | 4.1<br>n = 1,843      | 4.3<br>n = 1,284     | 0.1                                      | 1.4                   | 1.4                   | 0.003*                       |
| Prevalence of underweight women   | 27.7<br>n = 1,729     | 20.9<br>n = 1,230    | -5.8                                     | 44.8                  | 41.4                  | 0.000***                     |
| Contraceptive Prevalence Rate   | 73.4<br>n = 1,419     | 65.2<br>n = 1,006    | -6.6                                     | 44.2                  | 47.1                  | 0.000***                     |
| Percent of births receiving at least 4 antenatal care (ANC) visits  | 5.4<br>n = 627        | 15.4<br>n = 564      | 10.9                                     | 22.6                  | 36.9                  | 0.000***                     |
| Percentage of women of reproductive age who have access to primary healthcare services received from health department of GoB | 42<br>n = 1,843       | 72.3<br>n = 1,120    | 30.3                                     | 49.4                  | 44.75                 | 0.000***                     |
| Antenatal Care  | 5.4<br>n = 1,843      | 68.3<br>n = 173      | 62.9                                     | 22.6                  | 46.65                 | 0.000***                     |
| Postnatal care and vitamin A supplementation  | 2.3<br>n = 1,843      | 10.1<br>n = 1,120    | 7.8                                      | 15.0                  | 30.18                 | 0.000***                     |
| Iron, folic acid and vitamin A supplementation  | 13.6<br>n = 1,843     | 22.6<br>n = 1,284    | 9.0                                      | 34.3                  | 41.83                 | 0.000***                     |
| Child health care services  | 9.8<br>n = 1,843      | 37.3<br>n = 1,120    | 27.5                                     | 29.7                  | 48.39                 | 0.000***                     |
| Treatment and preventative advice   | 7.7<br>n = 1,843      | 19.6<br>n = 1,284    | 11.9                                     | 26.7                  | 39.72                 | 0.000***                     |
| Growth monitoring and promotion   | 2.5<br>n = 1,843      | 13.2<br>n = 1,120    | 10.7                                     | 15.6                  | 33.91                 | 0.000***                     |
| Medication and deworming  | 17.8<br>n = 1,843     | 43.9<br>n = 1,284    | 26.1                                     | 38.3                  | 49.65                 | 0.000***                     |
| Routine immunization and vitamin A supplementation  | 18.2<br>n = 1,843     | 39.6<br>n = 1,120    | 21.4                                     | 38.6                  | 48.92                 | 0.000***                     |
| Newborn care  | 2.2<br>n = 1,843      | 20.8<br>n = 1,120    | 18.6                                     | 14.8                  | 40.58                 | 0.000***                     |
| Other services  | 6.7<br>n = 1,843      | 32.8<br>n = 1,284    | 32.8                                     | 25.1                  | 48.90                 | 0.000***                     |

ns = not significant,\* p<0.05, \*\* p<0.01, \*\*\* p<0.001



**Table 3.12: Children's Health Pre-Post Indicators**

| <b>Indicator</b>  | <b>Baseline value</b> | <b>Endline value</b> | <b>Raw Difference (Baseline-Endline)</b> | <b>SD of BL value</b> | <b>SD of EL value</b> | <b>P value of difference</b> |
|---|-----------------------|----------------------|--|-----------------------|-----------------------|------------------------------|
| Prevalence of underweight children under 5 years of age (Total)                     | 36.2<br>n = 1,836     | 21.2<br>n = 1,299    | -15.0                                    | 48.1                  | 40.91                 | 0.000***                     |
| Male  | 35.7<br>n = 903       | 18.2<br>n = 662      | -17.5                                    | 48.0                  | 38.61                 | 0.000***                     |
| Female  | 36.7<br>n = 933       | 24.4<br>n = 637      | -12.3                                    | 48.2                  | 42.98                 | 0.000***                     |
| Prevalence of stunted children under 5 years of age (Total)                         | 41.0<br>n = 1,816     | 34.6<br>n = 1,298    | -6.4                                     | 49.2                  | 47.57                 | 0.000***                     |
| Male  | 41.0<br>n = 892       | 35.1<br>n = 661      | -5.9                                     | 49.2                  | 47.77                 | 0.018*                       |
| Female  | 41.1<br>n = 924       | 34.0<br>n = 637      | -7.1                                     | 49.2                  | 47.40                 | 0.004**                      |
| Prevalence of wasted children under 5 years of age (Total)                          | 14.3<br>n = 1,826     | 5.9<br>n = 1,297     | -8.4                                     | 35.1                  | 23.65                 | 0.000***                     |
| Male  | 14.4<br>n = 898       | 5.9<br>n = 660       | -8.5                                     | 35.1                  | 23.58                 | 0.000***                     |
| Female  | 14.3<br>n = 928       | 5.9<br>n = 637       | -8.4                                     | 35.1                  | 23.74                 | 0.000***                     |
| Percentage of children under age 5 with diarrhea in the last two weeks (Total)      | 15.3<br>n = 1,877     | 4.2<br>n = 1,301     | -11.1                                    | 36.0                  | 20.13                 | 0.000***                     |
| Male  | 14.9<br>n = 921       | 4.6<br>n = 664       | -10.3                                    | 35.6                  | 21.04                 | 0.000***                     |
| Female  | 15.6<br>n = 956       | 3.8<br>n = 637       | -11.8                                    | 36.4                  | 19.13                 | 0.000***                     |
| Percentage of children under age 5 with diarrhea treated with ORT (Total)           | 82.6<br>n = 292       | 89.7<br>n = 58       | 7.1                                      | 38.0                  | 30.70                 | 0.124                        |
| Male  | 85.2<br>n = 140       | 92.5<br>n = 33       | 7.3                                      | 35.6                  | 26.72                 | 0.189                        |
| Female  | 80.1<br>n = 152       | 86.0<br>n = 25       | 5.9                                      | 40.0                  | 35.40                 | 0.450                        |
| Prevalence of exclusive breast-feeding of children under six months of age          | 41.6<br>n = 157       | 59.1<br>n = 106      | 17.5                                     | 49.4                  | 49.40                 | 0.005**                      |
| Male  | 46.9<br>n = 69        | 65.3<br>n = 57       | 18.4                                     | 50.3                  | 48.01                 | 0.038*                       |
| Female  | 37.4<br>n = 88        | 51.7<br>n = 49       | 14.3                                     | 48.7                  | 50.49                 | 0.109                        |
| Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD) | 17.8<br>n = 556       | 46.0<br>n = 420      | 28.2                                     | 38.3                  | 49.91                 | 0.000***                     |
| Male  | 17.2<br>n = 272       | 44.7<br>n = 209      | 27.5                                     | 37.8                  | 49.84                 | 0.000***                     |
| Female  | 18.4<br>n = 284       | 47.6<br>n = 211      | 29.2                                     | 38.8                  | 50.01                 | 0.000**                      |

ns = not significant,\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

**Table 3.13: WASH Pre-Post Indicators (RQ1)**

| <b>Indicator</b>  | <b>Baseline value</b> | <b>Endline value</b> | <b>Raw Difference (Baseline-Endline)</b> | <b>SD of BL value</b> | <b>SD of EL value</b> | <b>P value of difference</b> |
|---|-----------------------|----------------------|--|-----------------------|-----------------------|------------------------------|
| Percentage of households using an improved source of drinking water   | 80.5<br>n = 1,843     | 87.8<br>n = 1,188    | 7.3                                      | 39.6                  | 32.70                 | 0.000***                     |
| Percentage of households in target areas practicing correct use of recommended household water treatment technologies | 0.9<br>n = 1,843      | 1.4<br>n = 1,188     | 0.5                                      | 9.6                   | 11.81                 | 0.222                        |
| Percent of households in target areas practicing boiling  | 0.1<br>n = 1,843      | 0.8<br>n = 1,188     | 0.7                                      | 3.7                   | 9.04                  | 0.011**                      |
| Percent of households in target areas practicing bleaching  | 0.0<br>n = 1,843      | NA<br>n = 1,188      | NA                                       | 0.0                   | NA                    | NA                           |
| Percent of households in target areas practicing filtering  | 0.8<br>n = 1,843      | 0.6<br>n = 1,188     | -0.2                                     | 8.9                   | 7.65                  | 0.510                        |
| Percent of households in target areas practicing solar disinfecting   | 0.0<br>n = 1,843      | NA                   | NA                                       | 0.0                   | NA                    | NA                           |
| Percent of households that can obtain drinking water in less than 30 minutes (round trip)                             | 98.3<br>n = 1,843     | 99.8<br>n = 1,188    | 1.5                                      | 12.8                  | 4.08                  | 0.000***                     |
| Percentage of households using improved sanitation facilities   | 15.5<br>n = 1,843     | 49.4<br>n = 1,188    | 33.9                                     | 36.2                  | 50.02                 | 0.000***                     |
| Percent of households in target areas practicing open defecation  | 4.9<br>n = 1,843      | 0.7<br>n = 1,188     | -4.2                                     | 21.5                  | 8.07                  | 0.000***                     |
| Percentage of households with soap and water at a handwashing station commonly used by family members                 | 26.4<br>n = 1,843     | 75.4<br>n = 1,188    | 49.0                                     | 44.1                  | 43.10                 | 0.000***                     |

ns = not significant, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### **1.1.5 DETAILED FINDINGS OF PURPOSE 3: STRENGTHENED GENDER EQUITABLE ABILITY OF PEOPLE, HOUSEHOLDS, COMMUNITIES AND SYSTEMS TO MITIGATE, ADAPT TO AND RECOVER FROM MAN-MADE AND NATURAL SHOCKS**

#### **OVERVIEW OF PURPOSE 3 FINDINGS**

The third pathway or purpose SHOUHARDO III designed to meet their goal was through the strengthened gender-equitable ability of people, households, communities and systems to mitigate, adapt to, and recover from man-made and natural shocks. **Findings for Research Question 2 will reveal that both our impact and performance evaluations demonstrate progress being made in strengthening some of these abilities.** The impact evaluation found that households in SHOUHARDO III villages that experienced major shocks were better able to mitigate the effects of the shocks—maintaining their food consumption—than households in comparison villages that also experienced major shocks. A strengthened ability to recover from shocks through access to agricultural extension services and adoption of sustainable agricultural and storage practices was also developed. Here, qualitative evidence from six best-case scenario villages shows how some of these abilities were strengthened by SHOUHARDO III; however, we were not able to measure the gender equity of the changes.

In this section, we illustrate that, in best case scenario villages, **progress in achieving Purpose 3 primarily happened through improved household and community-level capacities (Sub-**

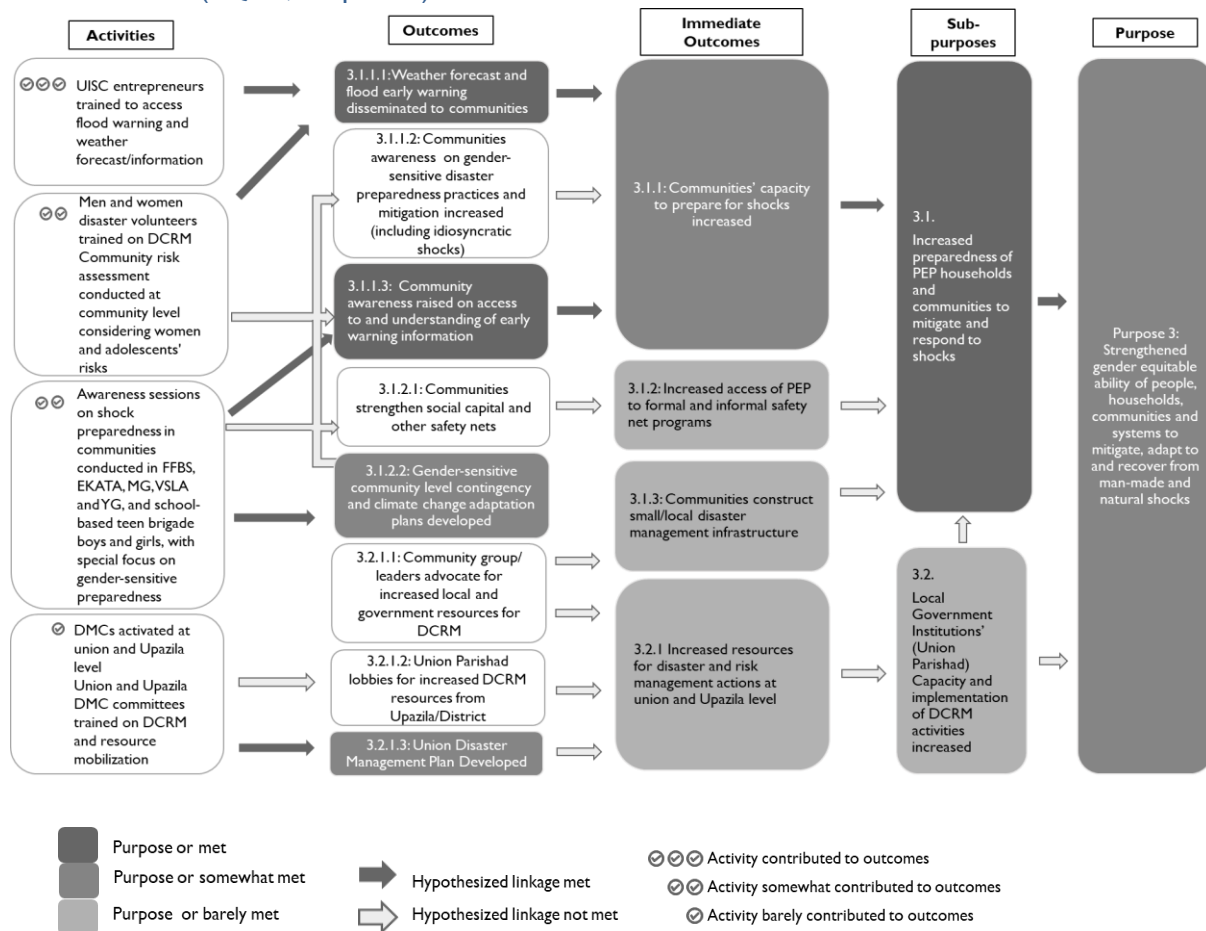
**Purpose 3.1**), with some reference to the role of local government institutions' (Union Parishad) capacity and implementation of disaster and climate risk management (DCRM) activities (Sub-Purpose 3.2). These findings highlight the possible pathways to achieving Purpose 3. We observe the following conclusions as noted in Table 3.14:

**Table 3.14: Key Findings on the Extent to Which Sub-Purpose Pathways Produced Positive Outcomes**

| Sub-Purpose   | Key Findings from the Qualitative and Quantitative Research  |
|---|--|
| <b>Sub-Purpose 3.1:</b> Increased Preparedness of PEP Households and Communities to Mitigate and Respond to Shocks  | <ul style="list-style-type: none"> <li>● Increased preparedness of PEP households and communities to mitigate and respond to shocks largely came through increases in communities' capacities to prepare for shocks.</li> <li>● Participants interviewed unanimously reported having better awareness of and access to early warning information through mobile devices and Disaster Management Committees that they did not have prior to SHOUHARDO III. These committees are very active in their communities.</li> <li>● Participants reported some measures to improve protection of their communities and homes from floods.</li> </ul> |
| <b>Sub-Purpose 3.2:</b> Local government institutions' (Union Parishad) capacity and implementation of disaster and climate risk management (DCRM) Activities Increased | <ul style="list-style-type: none"> <li>● As a result of SHOUHARDO III training, at least some local governments were able to develop, fund, and implement Disaster and Climate Risk Management plans.</li> <li>● Participants noted that resources for Disaster and Climate Risk Management plans are lacking and hinder the ability of communities to fully carry out the plans.</li> </ul>   |

In Figure 3.31, we show all activities, outcomes, and sub-purposes that were hypothesized and were reported to contribute to Purpose 3. We then discuss in more detail the elements and pathways that had the greatest influence on the achievement of Purpose 3.

Figure 3.31: Activities and Outcomes Leading to Strengthened Gender-Equitable Ability of People, Households, Communities and Systems to Mitigate, Adapt to and Recover from Man-Made and Natural Shocks (RQ1.3, Purpose 3)



### SUB-PURPOSE 3.1: INCREASED PREPAREDNESS OF PEP HOUSEHOLDS AND COMMUNITIES TO MITIGATE AND RESPOND TO SHOCKS

Increased preparedness of PEP households and communities to mitigate and respond to shocks largely came through increases in communities' capacities to prepare for shocks. Participants interviewed unanimously reported having better awareness of and access to early warning information through mobile devices and Disaster Management Committees that they did not have prior to SHOUHARDO III. This has allowed them to prepare for hazardous weather in time to protect their livestock, crops, and homes. As a result of SHOUHARDO III training and the activity of the Disaster Management Committees, participants know the hotline number they can call via their mobile devices to receive a weather forecast. Many participants also reported that the Disaster Management Committees in their communities are very active and make warnings regarding possible dangerous weather largely through word of mouth and by broadcasted messages through mosque speakers so community members can take the necessary precautions. Following SHOUHARDO-III training sessions, most community members were better-equipped to prepare for and respond to disasters, as shown in Table 3.15.

*"We didn't have access to this kind of information in the past. We have faced a lot [of] problems because of that... Many times, it happened that we were asleep and flood water entered our room. From SHOUHARDO, we get the information early. The three leaders inform us with disaster information." (FFG6\_F1)*

**Table 3.15: Disaster Preparedness, Response and Mitigation Practices Adopted at the**

| Level                  | Disaster and Response Preparedness  | Adoption by Participants | Widespread Adoption |
|------------------------|---|--------------------------|---------------------|
| <b>Community level</b> | Helping community members get to shelters during disasters  | Yes                      | Yes                 |
|                        | Prioritizing vulnerable community members (e.g., pregnant, sick, elderly, and children) to be taken to disaster shelters during disasters | Yes                      | Yes                 |
|                        | Delivering house-to-house disaster warnings   | Yes                      | Yes                 |
| <b>Household level</b> | Knowledge of where to access early disaster warnings  | Yes                      | Yes                 |
|                        | Reinforce home  | Yes                      | Yes                 |
|                        | Add height to home  | Yes                      | Yes                 |
|                        | Bring livestock to safe place   | Yes                      | Yes                 |
|                        | Bring children, pregnant women, and elderly to cyclone center   | Yes                      | Yes                 |

**Household and Community Levels in Best-case Scenario Villages (RQ1.3, Sub-Purpose 3.1)** With support from SHOUHARDO III, communities have constructed some local disaster management infrastructure, including a flood protection wall. Participants reported that they have embraced flood protection measures in their homes, including adding height to their homes and reinforcing their homes. Several participants noted that these adaptations have allowed them to stay in their homes year-round instead of migrating to a different living area during flooding seasons.

*“They constructed a wall here. The poor people couldn’t stay here during the monsoon season. They have to take shelter somewhere else by migrating from here. Because of the wall everyone can stay here. We don’t have to migrate anywhere else. We live six months in [name of village] and six months in other places. The flood water submerged the whole village. After the construction of the wall, we don’t have to face such problems.” (FYFG2\_F1)*

**SUB-PURPOSE 3.2: LOCAL GOVERNMENT INSTITUTIONS’ (UNION PARISHAD) CAPACITY AND IMPLEMENTATION OF DISASTER AND CLIMATE RISK MANAGEMENT (DCRM) ACTIVITIES INCREASED**

**Some participants in best-case scenario villages reported that the capacity of local government institutions to prepare for and respond to disasters improved, at least in part due to SHOUHARDO-III training.** As a result of SHOUHARDO III training, at least some local governments were able to develop, fund, and implement Disaster and Climate Risk Management plans. Disaster Management Committees were activated at local union and Upazila levels as part of these plans, and members of these committees were instrumental in disseminating warnings for hazardous weather events. Some participants reported shelters being built in their communities in case of disasters, and several participants reported that shelter for pregnant women, disabled community members, and the elderly is prioritized during flooding events, as instructed during SHOUHARDO III training. Similarly, several participants also reported that committees were trained to shift women and children to separate facilities from men during disasters. A handful of participants also reported receiving support after disasters from their Village Development

Committee, including food, living supplies, and monetary support. However, participants noted that resources for Disaster and Climate Risk Management plans are lacking and hinder the ability of communities to fully carry out the plans.

#### **I.1.6 DETAILED FINDINGS OF PURPOSE 4: INCREASED WOMEN’S EMPOWERMENT AND GENDER EQUITY**

##### **OVERVIEW OF PURPOSE 4 FINDINGS**

The fourth strategy SHOUHARDO III aimed to achieve its goal was through improved women’s empowerment and gender equity. In this section, we look at whether the SHOUHARDO III program had any effect on women’s empowerment and gender equity. The research team relied on all three evaluation methods for Purpose 4. First, the research team used the pre-post evaluation to measure any changes in women’s empowerment outcomes before and after the SHOUHARDO III program. Secondly, the research team used the impact evaluation to analyze whether any differences in women’s empowerment are attributable to SHOUHARDO III by comparing outcomes in the treatment villages to those in the comparison villages. The research team then used the qualitative performance evaluation in “best case scenario” villages where the strongest project implementation occurred to help identify the activities that may have contributed most to improving women’s empowerment outcomes. These program pathways are presented as the activities, outcomes, and sub-purposes involved in Purpose I.

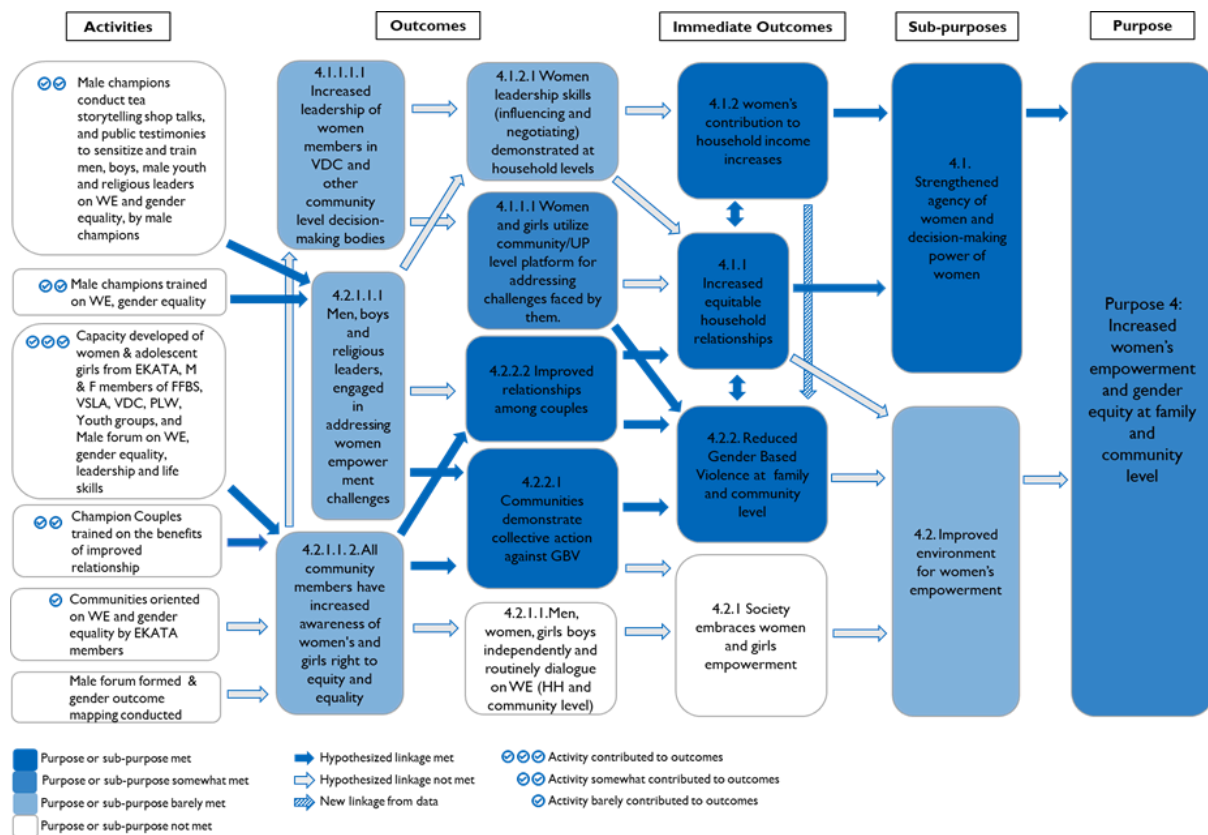
Findings from the pre-post evaluation show improvements in some indicators of women’s empowerment and gender equity including improvement in the number of husbands that help with household tasks as well as a reduction in the number of women who need to seek permission to visit certain locales. However, findings from the impact evaluation show that these improvements were similar to those of comparison villages. This suggests that the improvements in women’s empowerment and gender equity were most likely not caused by the SHOUHARDO III program. We observe the following conclusions as noted in Table 3.16:

**Table 3.16: Key Findings on the Extent to Which Sub-Purpose Pathways Produced Positive Outcomes (RQ1.4)**

| Sub-Purpose   | Key Findings from the Qualitative and Quantitative Research  |
|---|--|
| <p><b>Sub-Purpose 4.1:</b><br/>Strengthened Agency and Decision-Making Power of Women</p> | <ul style="list-style-type: none"> <li>● Over the lifetime of the project, women’s mobility improved across all age groups according to pre-post indicators. The impact evaluation finds that while there are no meaningful differences in the overall share of married women needing to seek permission to visit certain locals between SHOUHARDO III villages and comparison villages, younger women have slightly lower shares seeking permission compared to comparison villages. This is offset by a higher share among older women who seek permission.</li> <li>● Pre-post results show large improvements in women’s ability to make decisions about their own income. Overall, qualitative results in base-case-scenario villages link increased agency/mobility and decision-making power among women to women’s increased incomes and increased contributions to household income overall.</li> <li>● Findings from the pre-post evaluation and qualitative analysis indicate that households divided household labor more equitably at endline than baseline, suggesting that intra-household relationships were more equitable. Participants in best-case-scenario villages credited improved intra-household relationships to SHOUHARDO III gender trainings, as well as women’s involvement in on- and off-farm activities.</li> <li>● Best-case-scenario participants reported that improved intra-household relationships led to women feeling increased comfort in voicing their opinion on household decisions.</li> <li>● Pre-post findings show limited improvements in women’s contributions to household income after the program. This included a decline in the percentage of women who earned cash in the past 12 months in comparison to an increase in the percentage of men who did. Women in best-case-scenario villages reported earning more from income-generating activities and link this to improved control over decision-making of how to spend their income.</li> </ul> |
| <p><b>Sub-Purpose 4.2:</b><br/>Improved Environment for Women’s Empowerment</p>           | <ul style="list-style-type: none"> <li>● Pre-post evaluation findings show very slight reductions in the rates of child marriage and early pregnancy. Best-case-scenario village respondents attributed changes to increased awareness around the dangers of marrying at a young age following SHOUHARDO III training sessions, strengthened community groups, and increased equitable decision-making within households.</li> <li>● Qualitative findings in best-case-scenario villages suggested reductions in domestic violence and sexual harassment, and credited the reductions to improved household income, improved relationships between husbands and wives, and strengthened community action against gender-based violence after SHOUHARDO III training sessions.</li> <li>● However, findings from the impact evaluation indicate that these improvements were similar between the treatment and comparison villages at endline, suggesting that the SHOUHARDO III program did not cause these outcomes.</li> </ul>   |

As demonstrated in the table above, findings from the qualitative performance evaluation in best case scenario villages illustrate the possible pathways to achieving Purpose 4. Participants from best case scenario villages reported that women’s empowerment and gender equity improved primarily through strengthened agency of women and decision-making power of women (Sub-Purpose 4.1), and to a lesser extent to an improved environment for women’s empowerment (Sub-Purpose 4.2). In Figure 3.32, we show all activities, outcomes, and sub-purposes that were hypothesized and reported to contribute to Purpose 4. We then discuss in more detail the elements and pathways that had the greatest influence on the achievement of Purpose 4 in best case scenario villages.

Figure 3.32: Activities, Outcomes, and Sub-Purposes that Led to Increased Women’s Empowerment and Gender-Equity in Best-case Scenario Villages (RQ1.4, Sub-Purposes 4.1 and 4.2)



### SUB-PURPOSE 4.1: STRENGTHENED AGENCY AND DECISION-MAKING POWER OF WOMEN

To measure women’s agency and decision-making power, the research team used two primary indicators: mobility and decision-making over income. For this evaluation, women’s mobility is defined as whether or not they must seek permission to visit certain locations such as a market or a friend’s house. As women begin to go outside of the home for work, it is thought that they will gain the confidence to exert more authority over decisions made in the home and experience greater degrees of self-efficacy. In Bangladesh, the employment of women has shown to increase a woman’s influence over decisions involving matters such as healthcare and large-scale purchases (UN-Women, 2019). The research team used findings from all three evaluations for women’s mobility, and only used the pre-post and qualitative evaluations for women’s decision-making over income.

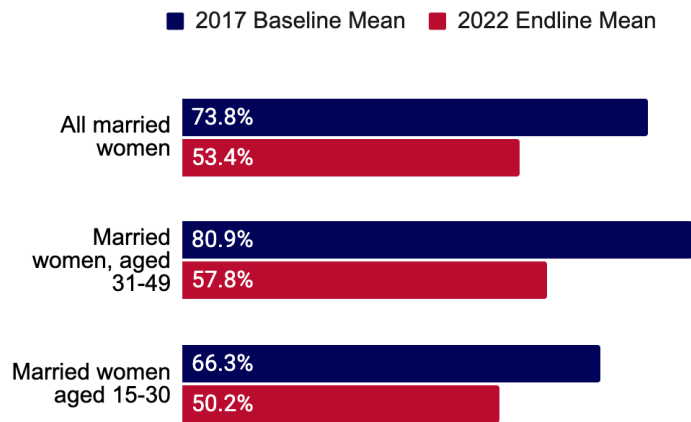
#### Women’s mobility

**Pre-post comparisons between the baseline and endline data indicate that women’s mobility improved across all age groups.** As shown in Figure 3.33, the percentage of married women seeking permission to visit certain locales declined by 20 percentage points.



Figure 3.33: Pre-Post Analysis - Married women in SHOUHARDO III villages who seek permission to visit certain locales at baseline and endline (RQ I.4)

Percent of married women, aged 15-49, who need to seek permission to visit certain locales

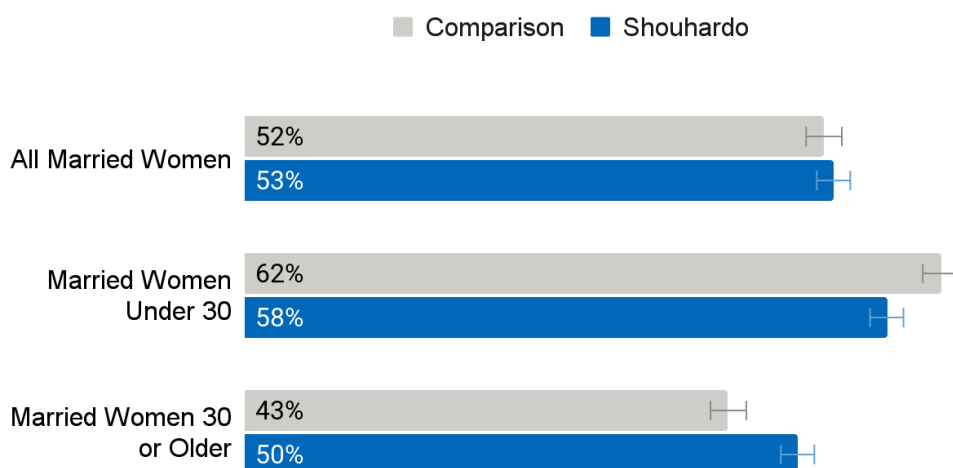


However, findings from the impact evaluation show that there were similar improvements in women’s mobility between the households in SHOUHARDO III treatment villages and households in comparison villages. This suggests that, even though the pre-post and performance evaluations showed that mobility improved after the SHOUHARDO III program, these improvements were likely not solely caused by the program. As shown in Figure 3.33, there are no meaningful differences in the overall share of married women who need to seek permission to visit certain locales between women in treatment and comparison villages. The SHOUHARDO III program villages see slightly lower shares<sup>30</sup> of younger women (ages 15-29) who need to seek this permission than in comparison villages, suggesting that the program contributed to these improvements in mobility for younger women. For older women (ages 30-49), a higher share reported seeking permission to visit locales than in comparison villages. The improvements among younger women appear to be offset by the higher share who seek permission among older women. .

<sup>30</sup> Significant at the 95th percentile.

Figure 3.34: Impact Evaluation Analysis - Married women in SHOUHARDO III villages and comparison villages who need to seek permission to visit certain locales (RQI.4)<sup>31</sup>

Percent of married women, aged 15-49, who need to seek permission to visit certain locales



#### Decision-making Over Income

**The pre-post findings show that women’s decision making over their own income improved between baseline and endline.** At endline, more women made decisions alone about how to spend their self-earned cash, and the gap between the share of women versus men making decisions over their income decreased (Figure 3.35).<sup>32</sup>

<sup>31</sup> This figure reflects adjusted means which are adjusted for all of the covariates in the regressions for each outcome.

<sup>32</sup> These indicators are generated from asking men and women “who usually decides how the cash you earn will be used?” The answer choices include yourself, spouse, yourself and spouse jointly, yourself and other jointly, and other. Those that select ‘yourself’ are considered to make decisions alone and those that select ‘yourself and spouse jointly’ are considered to make decisions jointly about self-earned cash.

Figure 3.35: Pre-Post Analysis - Men and women making decisions alone about self-earned cash (RQ1.4)

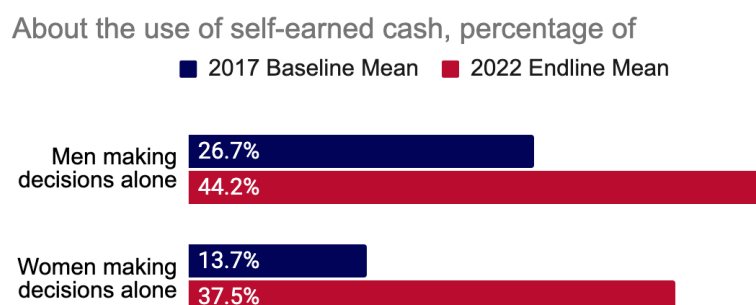
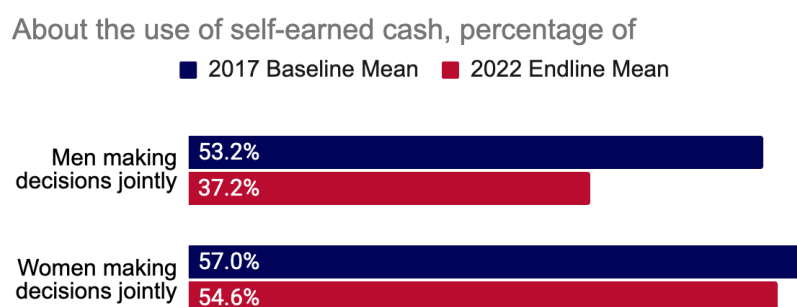


Figure 3.36: Pre-post Analysis - Men and women making decisions jointly about self-earned cash (RQ1.4)



**Qualitative participants from best-case scenario villages reported increased agency/mobility and decision-making power among women due to women’s increased contributions to household income and indirectly due to increased equitable household relationships.** This indirect pathway was also due to women’s increased incomes, which contributed to improved relationships between wives and husbands and daughters-in-law and mothers-in-law (Immediate Outcome 4.1.1) and in turn improved women’s decision-making power and agency.

**OUTCOME 4.1.1: INCREASED EQUITABLE HOUSEHOLD RELATIONSHIPS**

The SHOUHARDO III program hypothesized that the first way women’s agency and decision-making power would improve would be by strengthening the equity of household relationships (Sub-purpose 4.1). The pre-post evaluation analyzed improvements in household relationship equity by how responsibilities were divided within the household, or intra-household division of labor. The qualitative performance evaluation assessed the perceived contributors of strengthened intra-household relationships.

**Findings from the pre-post evaluation indicate that households divided household labor more equitably at endline than baseline, suggesting that intra-household relationships were more equitable.**At endline, nearly all women reported that their husbands helped them with household tasks—a 52.7 percentage point improvement from baseline (Figure 3.37). Compared to the beginning of the SHOUHARDO III program, more husbands were helping wives with household tasks at the end of the program, including cleaning the house, gathering water or firewood, cooking,

agricultural activities, selling produce or going to the market, and helping with homestead farming and poultry rearing. Qualitative participants from best-case scenario villages likewise reported more equitable division of labor within the household and also outside the household. For example, husbands began taking on more child-rearing and cooking tasks while women took on more income-generating tasks. Participants explained that, after SHOUHARDO III, husbands and wives are working and earning together.

Figure 3.37: Pre-Post Analysis - Percent of married women aged 15-49 whose husbands help with household tasks (RQI.4)

Percent of married women who's husbands help with household tasks



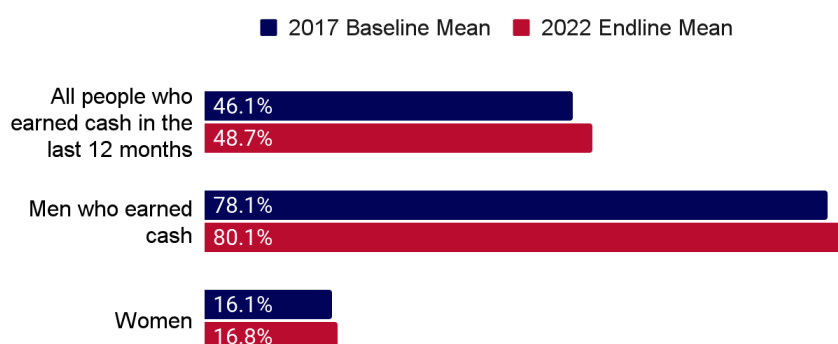
**Findings from our qualitative performance evaluation in best case scenario villages revealed that SHOUHARDO III gender trainings, as well as women’s involvement in on- and off-farm activities, contributed to improved intra-household relationships.** These improved relationships between wives, husbands, and mothers-in-law, resulted in increased decision-making and agency among women. Prior to SHOUHARDO III, women reported that they were uncomfortable or unable to share their opinions on household decisions. After SHOUHARDO III, however, the understanding between women, husbands, and mothers-in-law improved, and they were more receptive to each other’s opinions. Improvements in the relationships between daughters-in-law and mothers-in-law also increased daughters-in-law’s mobility. Mothers-in-law, in addition to husbands, tended to restrict daughters-in-law’s movements before they attended SHOUHARDO III-facilitated meetings together.

**OUTCOME 4.1.2: WOMEN’S CONTRIBUTION TO HOUSEHOLD INCOME INCREASES**

The SHOUHARDO III program hypothesized that the second way women’s agency and decision-making power would improve would be by increasing women’s contribution to household incomes. The research used findings from the pre-post and qualitative performance evaluations to assess changes to women’s income and what SHOUHARDO III activities contributed to this outcome.

**Findings from the pre-post evaluation show that there were limited improvements in women’s contributions to household income after the program.** Women earned only 10.9% of household income at baseline, and this declined further to 9.5% at endline. The share of men that reported earning cash in the last 12 months increased slightly between baseline and endline, while the share of women that reported earning cash decreased (Figure 3.38). The ability of men and women to earn incomes may have been affected by COVID-19, including mobility restrictions and being forced to sell productive assets, which Annex M describes in detail. Of all cash earned in a household, the majority of cash earned continues to be by men (Figure 3.38). However, the pre-post evaluation did find that there was a 23.8% increase in the percentage of cash earning women in a union that make decisions alone about how to use their self-earned cash indicating that women are better able to make independent financial decisions.

Figure 3.38: Pre-Post Analysis - Cash Earners by Gender (RQI.4)



In contrast, women in best-case scenario villages who participated in qualitative interviews reported that, compared to before the SHOUHARDO III program, they earned additional income from on- and off-farm activities, resulting in improvements in their control over and decision-making of their income. Several women described being able to be economically independent from their husbands and parents with the money they earned from SHOUHARDO III-promoted income-generating activities described in Purpose 1. By earning their own income and having their own savings, they could make their own decisions on how to spend their self-earned money, they explained. Our qualitative data revealed that women chose to use their self-earned money on their children’s education, health, or other family-related needs.

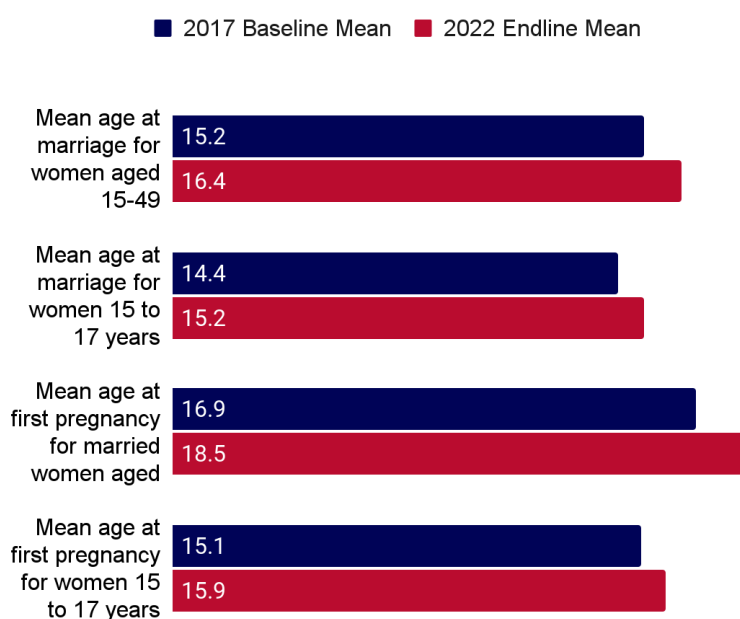
#### SUB-PURPOSE 4.2: IMPROVED ENVIRONMENT FOR WOMEN’S EMPOWERMENT

SHOUHARDO III aimed to improve the environment for women’s empowerment by supporting communities to embrace women and girls’ empowerment (Intermediate Outcome 4.2.1) and reduced gender-based violence (Intermediate Outcome 4.2.2). In best case scenario villages, few qualitative participants linked increased gender equity to better social environments for women’s empowerment. Rather, decreased gender-based violence was the main change that created an environment enabling women’s empowerment, with gender-based violence including child marriage and early pregnancy, domestic violence, and sexual harassment. According to the pre-post evaluation findings, there were reductions in the rates of child marriage and early pregnancy. The qualitative performance evaluation suggests the activities that contributed most to these outcomes, with household members from best-case scenario villages also reporting reductions in the incidence of domestic violence and sexual harassment. However, findings from the impact evaluation indicate that these improvements were similar between the treatment and comparison villages at endline, suggesting that the SHOUHARDO III program did not cause these outcomes.

#### OUTCOME 4.2.2: REDUCED GENDER-BASED VIOLENCE AT FAMILY AND COMMUNITY LEVEL

Our pre-post indicator data suggest that the age at marriage and first pregnancy for women has increased since before the project began. However, these ages were only slightly higher than baseline (Figure 3.39), and remained below 18 – the legal marriage age in Bangladesh (Government of Bangladesh, 1929 Child Marriage Restraint Act).

Figure 3.39: Pre-Post Analysis - Mean age at marriage and first pregnancy for married women (RQ1.4)



Qualitative respondents from best case scenario villages reported decreased incidence of child marriage after the program, and attributed this decline to increased awareness around the dangers of marrying at a young age following SHOUHARDO III training sessions, strengthened community groups, and increased equitable decision-making within the household. These findings highlight the potential pathways that led to child marriage prevention.

Qualitative respondents reported that following SHOUHARDO III activities, they were more aware of the negative health- and nutrition-related consequences of child marriage and adolescent pregnancy. Respondents said that most women knew it was important to delay marriage until after 18, explaining that if a child were to be married, they would become pregnant within the following year. This can lead to sickness, malnutrition, and even death, for both the adolescent mother and her child(ren), born and unborn.

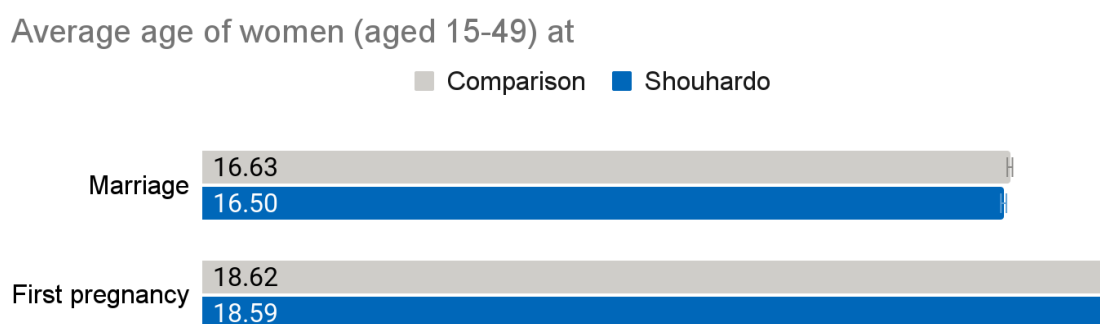
Many qualitative respondents reported that community groups, which were strengthened by SHOUHARDO III, played a key role in preventing child marriages. These groups included village development committees, women’s groups, and male champion groups. Many respondents explained that if a community member heard that a family was planning to marry their daughter at a young age, community groups would try to convince them against it by citing the potential health risks for their child.

Qualitative respondents were also more aware that they could contact union parishads to stop child marriages. If community groups were unable to convince the family out of child marriage, they would notify the union/ward committees, who would then stop the marriage.

**Qualitative participants reported that increased equitable household decision-making following SHOUHARDO III trainings also played a role in decreasing child marriage in best-case scenario villages.** Specifically, participants explained that because women’s opinions were considered by their husbands after SHOUHARDO III, women could express that they did not want their children to be married before 18, and husbands would respect this decision. Before SHOUHARDO III, participants explained that husbands felt they did not need to consider their wife’s opinions when making decisions on child marriage.

**Although the pre-post and qualitative performance evaluations show there were reductions in the rates of child marriage and early pregnancy after the SHOUHARDO III program, the impact evaluation shows that these improvements are likely not attributable to the program.** Findings from the impact evaluation indicate that there are no meaningful differences in the age of women at marriage or first pregnancy between treatment and comparison villages (Figure 3.40).

Figure 3.40: Impact Evaluation Results - Mean age at marriage and first pregnancy for married women aged 15-49 (RQI.4)<sup>33</sup>



### Domestic Violence and Sexual Harassment

**Women from the qualitative interviews reported that factors including women’s increased contributions to household income, improved relationships between husbands and wives, and strengthened community action against gender-based violence after SHOUHARDO III training sessions decreased gender-based violence in best case scenario villages.**

Women’s increased incomes directly and indirectly decreased gender-based violence. Women explained that poverty, at least in part, drove household conflict, and now that household financial security has improved from women’s on- and off-farm income-generating activities, there was less violence and conflict in the household. Women’s contributions to household incomes also had an indirect effect on gender-based violence by improving the relationships between husbands and wives.

*“Previously, we have seen that the women did altercate with their husband very often due to financial insolvency. Now, both husband and wife are earning. We have seen that the women are*

<sup>33</sup> This figure reflects adjusted means which are adjusted for all of the covariates in the regressions for each outcome.

*cultivating vegetables and rearing goats and cows at home and their husband works outside. And they don't [have altercations as] much now." (CL\_M1)*

Improved relationships between wives and husbands was a second facilitator reducing conflict and violence. Participants explained that relationships improved from SHOUHARDO III-facilitated household- and community-based gender training. Women's involvement in agriculture and livelihood activities also improved relationships, with participants reporting that now husbands and wives worked together for the household, which gave them reason and opportunity to communicate and collaborate.

The third facilitator of decreased gender-based violence was strengthened community action against gender-based violence. SHOUHARDO III-supported community groups, including male champion groups, women's groups, and village development committees (VDCs), intervened when instances of violence, conflict, or harassment occurred and spread awareness and knowledge about the consequences of gender-based violence and women's rights. Participants were more aware about the harmful impacts of gender-based violence not only on women, but on families and children, leading to a reduction in this behavior.

*"Previously, we didn't know about women 's rights. Now, we discuss them in meetings...for example, violence against women. Previously, their husbands tortured them for dowry. Then, we discussed the matter in our groups, and we informed the VDC president about the incident and asked him to take action. Then, we taught the husband of the woman about this. And now he doesn't torture his wife anymore." (FFG2\_F5)*



INDICATOR TABLES FOR PURPOSE 4

Table 3.17: Gender Pre-Post Indicators (RQ1.4)

| Indicator  | Baseline value    | Endline value     | Raw Difference (Baseline-Endline) | SD of BL value | SD of EL value | P value of difference |
|--|-------------------|-------------------|-----------------------------------|----------------|----------------|-----------------------|
| Percentage of men and women who earned cash in the past 12 months  | 46.1<br>n = 4,997 | 48.7<br>n = 4,740 | 2.6                               | 49.9           | 50.00          | 0.010*                |
| Percentage of men who earned cash in the past 12 months  | 78.1<br>n = 2,424 | 80.1<br>n = 2,393 | 2.0                               | 41.3           | 39.91          | 0.081                 |
| Percentage of women who earned cash in the past 12 months  | 16.1<br>n = 2,573 | 16.8<br>n = 2,347 | 0.7                               | 36.7           | 37.36          | 0.508                 |
| Percentage of men in union and earning cash who make decisions alone about the use of self-earned cash                         | 26.7<br>n = 1,403 | 44.2<br>n = 1,120 | 17.5                              | 44.2           | 49.68          | 0.000***              |
| Percentage of women in union and earning cash who make decisions alone about the use of self-earned cash                       | 13.7<br>n = 286   | 37.5<br>n = 198   | 23.8                              | 34.5           | 48.53          | 0.000***              |
| Percentage of men in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash   | 53.2<br>n = 1,403 | 37.2<br>n = 1,120 | -16.0                             | 49.9           | 48.35          | 0.000***              |
| Percentage of women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash | 57.0<br>n = 286   | 54.6<br>n = 198   | -2.4                              | 49.6           | 49.92          | 0.602                 |
| Mean percent of household income earned by women in the month before assessment  | 10.9<br>n = 1,240 | 9.5<br>n = 1,117  | -1.4                              | 28.4           | 25.7           | 0.209                 |
| Mean age at marriage for women aged 15-49  | 15.2<br>n = 1,639 | 16.4<br>n = 1,120 | 1.2                               | 2.7            | 2.09           | 0.000***              |
| Mean age at marriage for women 15 to 17 years  | 14.4<br>n = 93    | 15.2<br>n = 29    | 0.8                               | 1.3            | 0.81           | 0.000***              |
| Mean age at first pregnancy for married women aged 15 - 49   | 16.9<br>n = 1,537 | 18.5<br>n = 965   | 1.6                               | 2.7            | 2.53           | 0.000***              |
| Mean age at first pregnancy for women 15 to 17 years   | 15.1<br>n = 59    | 15.9<br>n = 12    | 0.8                               | 1.2            | 0.96           | 0.014                 |
| Percent of married women aged 15 - 49 who need to seek permission to visit certain locales                                     | 72.0<br>n = 1,843 | 52.2<br>n = 1,120 | -19.8                             | 44.9           | 49.98          | 0.000***              |
| Percent of women < 30 who seek permission  | 77.8<br>n = 925   | 58.3<br>n = 507   | -19.5                             | 41.6           | 49.35          | 0.000***              |
| Percent of women ≥ 30 who seek permission  | 65.4<br>n = 918   | 47.3<br>n = 613   | -18.1                             | 47.6           | 49.97          | 0.000***              |
| Percent of married women aged 15 - 49 who's husbands help with household tasks   | 36.9<br>n = 1,843 | 97.6<br>n = 1,120 | 60.7                              | 48.3           | 15.26          | 0.000***              |

ns = not significant,\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 1.1.7 DETAILED FINDINGS OF PURPOSE 5: PROVISION AND UTILIZATION OF PUBLIC SERVICE FOR COMMUNITIES

#### OVERVIEW OF PURPOSE 5 FINDINGS

The fifth and final pathway or purpose SHOUHARDO III designed to meet their goal was increased provision and utilization of public services such as local elected bodies (LEB) and nation building departments (NBD) for communities, especially for PEP women. **Our qualitative evidence shows that, in best-case scenario villages, SHOUHARDO III did contribute to the provision and utilization of public services for communities.**

The two sub-purposes that SHOUHARDO III focused on to achieve Purpose 5 were: (1) improving communities' (especially PEP) ability to demand and negotiate increased public (UPs & NBDs) services (Sub-Purpose 5.1), and (2) increasing the accountability of LEBs & NBDs to meet the needs of communities, especially of PEP (Sub-Purpose 5.2).

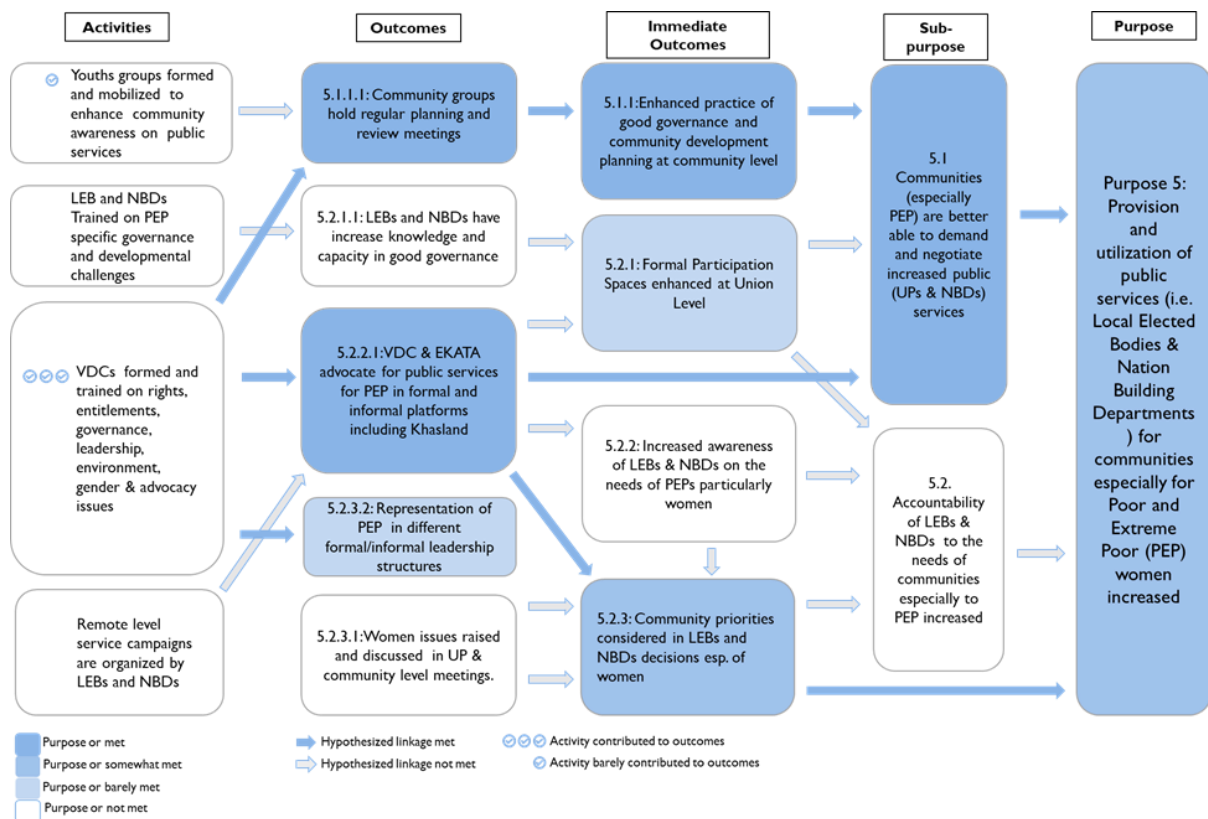
Below, the report describes how Purpose 5 was primarily met by community groups, which were established or strengthened by SHOUHARDO III, and were central to advocating for public services (Sub-Purpose 5.1) and sometimes providing public services when they were not provided by LEBs or NBDs. There is limited evidence of increased accountability of LEBs & NBDs to the needs of communities (Sub-Purpose 5.2). However, because of the strengthened advocacy of community groups, union parishads considered the service priorities of communities (Immediate Outcome 5.2.3) in decision-making. We observe the following conclusions as noted in Table 3.18:

**Table 3.18: Key Findings on the Extent to Which Sub-Purpose Pathways Produced Positive Outcomes (RQ1.5)**

| Sub-Purpose  | Key Findings from the Qualitative Research  |
|--|---|
| <p><b>Sub-Purpose 5.1:</b> Communities (Especially PEP) Are Better Able to Demand and Negotiate Increased Public (UPs &amp; NBDs) Services</p> | <ul style="list-style-type: none"> <li>● Community groups effectively worked to address various issues identified within their communities. Of the various community groups, VDCs – which SHOUHARDO III helped revitalize or establish – were reported to have contributed the most to community development.</li> <li>● VDCs from best-case scenario villages were able to advocate for and demand public services from union parishads following SHOUHARDO III activities, which resulted in locally-elected bodies considering community priorities.</li> <li>● Participants stated that VDCs improved outcomes by linking community groups to union parishads, increasing awareness of the public services communities had a right to from UPs, and allowing communities to take collective action to advocate for their needs when they needed to.</li> <li>● Very few participants reported that the specific needs of poor and extremely poor women were prioritized.</li> </ul> |

Figure 3.41 shows the activities, outcomes, and sub-purposes that led to increased provision and utilization of public services and resources in best-case scenario villages, mainly originating with the SHOUHARDO III activities that formed and trained community groups.

Figure 3.41: Activities, Outcomes, Immediate Outcomes, and Sub-purposes that Contributed to the Increased Provision and Utilization of Public Services in Best-Case Scenario Villages (RQ1.5, Purpose 5)



**SUB-PURPOSE 5.1: COMMUNITIES (ESPECIALLY PEP) ARE BETTER ABLE TO DEMAND AND NEGOTIATE INCREASED PUBLIC (UPs & NBDs) SERVICES**

Through effective community development planning and governance (Immediate Outcome 5.1.1) coupled with increased advocacy for public services from UPs (Outcome 5.2.2.1), community groups were able to increase the demand for public services (Sub-Purpose 5.1). Increased demand for public services was the main sub-purpose (out of the two hypothesized) that led to increased provision and utilization of public services (Purpose 5).

**OUTCOME 5.2.2.1: VDC & EKATA ADVOCATE FOR PUBLIC SERVICES FOR PEP IN FORMAL AND INFORMAL PLATFORMS**

Most participants from best-case scenario villages highlighted that community groups<sup>34</sup> effectively worked to address various issues identified within their communities, resulting in improvements across health, agriculture, disaster management, and women’s empowerment. Of the various community groups, VDCs, which SHOUHARDO III helped revitalize or establish, were reported to have contributed the most to community development. Participants explained that VDCs work to prevent child marriage and gender-based violence, support jobless youth in getting employment, spread knowledge about agriculture and fisheries production and disaster preparedness, link community members with local service providers, and implement infrastructure development activities. EKATA groups appear to have played a more limited role, possibly because, according to

<sup>34</sup> Community groups mentioned included VDCs, youth groups, women’s groups, male champion groups, farmer’s groups, disaster management committees, and EKATA (or Ekota Dol unity groups as referred to by participants).

CARE, they were not implemented in all communities and were scaled back during the final years of implementation.

**VDCs from best-case scenario villages were able to advocate for and demand public services from union parishads following SHOUHARDO III activities, which resulted in locally-elected bodies considering community priorities.** Participants explained that VDCs advocated for food relief following natural disasters, road repairs, social protection benefits for eligible community members, and community health centers from union parishads. Most participants said that after VDCs demanded such services, union parishads would usually consider these community-identified priorities and provide funding or support (Immediate Outcome 5.2.3). As the president of one VDC explains in the following quote, his village was able to advocate and receive support for road repairs from their union parishad.

*“We have to find out the scope of where I can develop the community. And [SHOUHARDO III] showed us the way by suggesting that I can get the information from [the union parishad]. But we didn’t know the way in the past. For example, the roads of the village are very narrow. If I want to widen the length, then I need money, labor, [and] manpower. How can we get all of these? I have no money; then where can I go? Then [we know] we [can] go to the union parishad, and we told them about it. They gave us a schedule and told us that we are giving some people, and you have to give some people to repair the road. Along with the chairman and the members of SHOUHARDO, [members of the VDC] voluntarily worked and we built a road here.” (FFG2\_F5)*

**However, very few participants noted that the specific needs of poor and extremely poor (PEP) women were prioritized.** This may be because the Empowerment Knowledge and Transformative Action (EKATA) groups, which were intended to empower and advocate for women’s needs and were limited in terms of the number of groups and the duration of implementation, and thus seldom mentioned by participants.

**Participants reported that SHOUHARDO III facilitated positive change by linking community groups to union parishads and increasing awareness of the public services communities had a right to form UPs.** For example, in the subsequent quote, one youth participant explains how communities and VDCs became more aware of the public services they were entitled to.

*“People became aware of their rights [through SHOUHARDO III]. Suppose there are many grants available for us from the agriculture office. As [our VDC] didn’t know about these, we don’t get these. They are connecting us with these, and we can get these services now. The agriculture office distributes seeds, fertilizer, which we didn’t get previously but now we get these. Many people of the village get these now from the agriculture office.” (MYFG1\_M1)*

**Some participants found VDCs to be effective because they allowed communities to take collective action to advocate for their needs.** These participants explained that before SHOUHARDO III, community members would individually seek services from union parishads, and union parishads were reluctant to listen to the needs of a single person. However, when communities demanded services together as a group, union parishads were forced to listen to their needs.

*“Previously, before SHOUHARDO, there were no groups or associations like these. Before, if there was any problem, then only a person would inform the members and chairman about that. But now we go to them as a team, and this proved very effective.” (MFG2\_MX)*

### **OUTCOME 5.1.1: ENHANCED PRACTICE OF GOOD GOVERNANCE AND COMMUNITY DEVELOPMENT PLANNING AT COMMUNITY LEVEL**

To address issues communicated to VDCs by community members, VDC members would discuss solutions, sometimes solving issues on their own and other times advocating for funding or public services from union parishads, as described under Outcome 5.2.2.1 above. Some participants reported that VDCs would fill any public service gaps themselves if union parishads were reluctant to provide them, as exemplified in the following quote,

*“Sometimes the [union parishad] chairman and members don’t want to repair the roads — then [the VDC] voluntarily repaired the roads on our own.” (FFG1\_F6)*

Participants reported that VDCs were active and continued to meet regularly to discuss and address village development challenges and solutions, with a few participants noting more formal Community Action Plans developed each year by VDCs. Participation in VDCs and other community groups reportedly increased after SHOUHARDO III began, at least in part because of the benefits community members experienced from these groups.

## **RESEARCH QUESTION 2: TO WHAT EXTENT HAS SHOUHARDO III DEVELOPED RESILIENCE CAPACITIES AND WHETHER THESE CAPACITIES CONTRIBUTED OR WILL LIKELY CONTRIBUTE TO SUSTAIN THE FOOD AND NUTRITION SECURITY OUTCOMES IN THE FACE OF SHOCKS?**

### **3.2.1 SUMMARY OF RESEARCH QUESTION 2 FINDINGS AND KEY TAKEAWAYS**

One of the goals of SHOUHARDO III was to develop the resilience of both households and communities in program areas by providing knowledge, skills, and technologies to improve their abilities to absorb shocks and stresses, adapt to them, and transform to reduce the impact of shocks.

This section describes the main shocks and stresses for households in SHOUHARDO III villages experienced over the past several years; the extent to which participants perceive that the project helped households, communities and local systems to cope with and recover from these shocks; and finally, how SHOUHARDO III may have laid a foundation for greater resilience to future shocks and stresses. Findings from the pre-post quantitative evaluation provide evidence of how resilience capacities have changed in SHOUHARDO III communities since project activities began. Evidence from the qualitative evaluation in “best case scenario” villages where project implementation occurred help to identify the program pathways that might have played the strongest roles in improving the resilience capacities of households in SHOUHARDO III villages, communities, and systems. Finally, the quantitative impact evaluation sheds light on how the resilience capacities of these communities compare to those of other, similar communities and helps to differentiate the effects of SHOUHARDO III from broader changes, such as longer-term economic development and general changes in policy or government programs.

#### **KEY TAKEAWAYS**

- The pre-post quantitative evaluation shows that, following SHOUHARDO III implementation, households perceived reduced exposure to shocks and reduced impact from shocks, but they also perceive less ability to recover from past and future shocks. Similarly, most indices of household resilience show similar or reduced levels compared to baseline.

- Qualitative evidence from “best-case scenario” SHOUHARDO III communities contextualizes these findings. While households report using a variety of mitigation approaches to reduce the harmful effects of recent shocks and attribute these practices to SHOUHARDO III, the COVID-19 pandemic was such an extreme and unprecedented shock that households still reported using negative coping strategies and experiencing food insecurity.
- The impact evaluation comparing SHOUHARDO III communities to other, similar communities finds no statistically significant differences between SHOUHARDO III villages and comparison villages on the Absorptive and Adaptive Resilience Indices. However, the evaluation does find large, positive, and statistically significant differences in the Transformative Resilience Index, driven by significantly higher rates of SHOUHARDO III respondents reporting access to agricultural extension services.
- The impact evaluation also suggests that households in SHOUHARDO III villages that experienced major shocks were better able to maintain their food consumption than households in comparison villages that also experienced major shocks. However, these protective benefits do not appear to have carried over to child stunting outcomes.

### 3.2.2 DETAILED FINDINGS OF RESEARCH QUESTION 2

#### MAIN SHOCKS AND STRESSES

Bangladesh is a nation challenged by natural, economic, health-related, and political risk factors that, in combination, create a very vulnerable population. It contains several regions prone to extreme flooding and droughts and is highly susceptible to natural disasters. A World Bank report documented that in a given three to five-year period, as many as two-thirds of the country experience severe flooding, which leads to consistent damage to housing, infrastructure, and agriculture (World Bank, 2010). Conditions are further exacerbated by tidal floods, cyclones in low-lying areas, droughts, and climate change effects (BBS, 2015). In 2021, the Climate Risk Index ranked Bangladesh the 7th country most affected by climate change between 2000-2019 due to salinity, flooding, cyclone and erosion effects. These environmental challenges contribute to a delicate economy that suffers from frequent price fluctuations and unstable access to government aid/loans. Resulting unstable incomes can further disrupt access to reliable food sources and clean water needed to maintain the health of individuals and families (USAID, 2016). On top of all these challenges, Bangladesh is also a young democracy that is still maturing and does not have consistent trust between citizens and the government (Hossain 2022).

Bangladesh’s long-term development depends in part on developing resilience to these climate-related and other shocks. USAID defines resilience as “the ability of people, households, communities, countries and systems to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth” (USAID 2013). Please see Box 3.1 for more detail on the three broad types of resilience capacities.

### Box 3.1: Resilience Capacities (RQ2.1)

Resilience capacities of people, households, communities and systems to withstand shocks are multidimensional and can encompass a range of abilities, including economic, social, technological, infrastructure, and institutional. Correspondingly, SHOUHARDO III used a multi-sectoral approach. Building resilience capacities can strengthen people, households, communities, and systems, and can reduce their vulnerability to shocks and stresses in three main ways: by helping them *absorb*, *adapt*, and/or *transform* in the face of disruptions. These different categories of resilience capacities allow for the possibility that households and communities can be both vulnerable and resilient (FSIN 2014).

**Absorptive** capacity is the capacity of households or communities to bounce back after a shock, which involves anticipating, planning, coping and recovering from shocks (Oxfam 2017). This capacity would include households' assets, availability of informal safety nets, access to cash and savings, preparedness and mitigation plans, availability of humanitarian assistance, and the like. During shocks, households might use one or more of these capacities to absorb and bounce back from the shock.

**Adaptive** capacity is the ability of a household or community to make appropriate changes in order to better manage or adjust to a changing situation, such as climate change or increasing periods of dryness. This would include changes in management of land, soil and water, and enhanced and inclusive access to productive resources including credit, markets, livestock and other agricultural inputs, social networks, and livelihood sources. These resources enable households to diversify their sources of food and/or income so, for example, adverse weather or the failure of one crop or the loss of one type of income, one crop, or one customer would not seriously threaten their food security.

**Transformative** capacity is the capacity to make fundamental changes in the structures that cause or increase vulnerability and risk as well as how risk is shared within societies. Transformative capacity provides the enabling environment that allows households or communities to absorb or adapt to shocks and stresses in ways that do not have negative impacts on their wellbeing (Bene 2018). Transformative capacity includes communal natural resources, basic agriculture and livestock services, collective actions, availability of formal safety nets, networking with external people/institutions, and the like.

Both treatment and comparison households who participated in the endline survey reported that the top five shocks they faced during the 12 months prior to the survey, from late 2021 through early 2022, were flash floods, high food prices, serious illness, loss of job, and debt. In practice, these shocks can be highly interrelated; participants in focus groups and interviews described how flooding and water erosion lead to crop and animal losses, loss of household food supplies and increased costs of food purchases due to sudden decreases in food supplies. Some households then take on debt to meet their basic needs.

Focus group participants and key informants in the qualitative evaluation reported that most years, flood water reaches and overwhelms a small number of households in each village for a short period of time, ranging from days to weeks. In these cases, households can take months to recover. In other years, flooding is more severe, affecting hundreds of households, and water can remain high for months. Community members described how, following a year of severe flooding, households can take years to recover. One female focus group participant succinctly described their relationship with the surrounding waterways. "*The river takes everything from us.*" (FFG13\_X)

In addition to short-term flooding, which is cyclical and dissipates after a period of days, weeks or months, most communities in the qualitative sample described a separate, but related phenomenon of river erosion, where land is permanently absorbed into rivers, destroying agricultural land and forcing entire households to relocate. One community member describes her experience with erosion. *“I moved from another place three years ago. I was on that side for two months. Then, I moved here. That area eroded two times.”* (FFG13\_X)

Qualitative evaluation participants less commonly reported shocks including earthquakes, droughts, and other types of extreme weather, including hail storms and thunderstorms that cause fires, damage to crops, and injuries to households during the past five years.

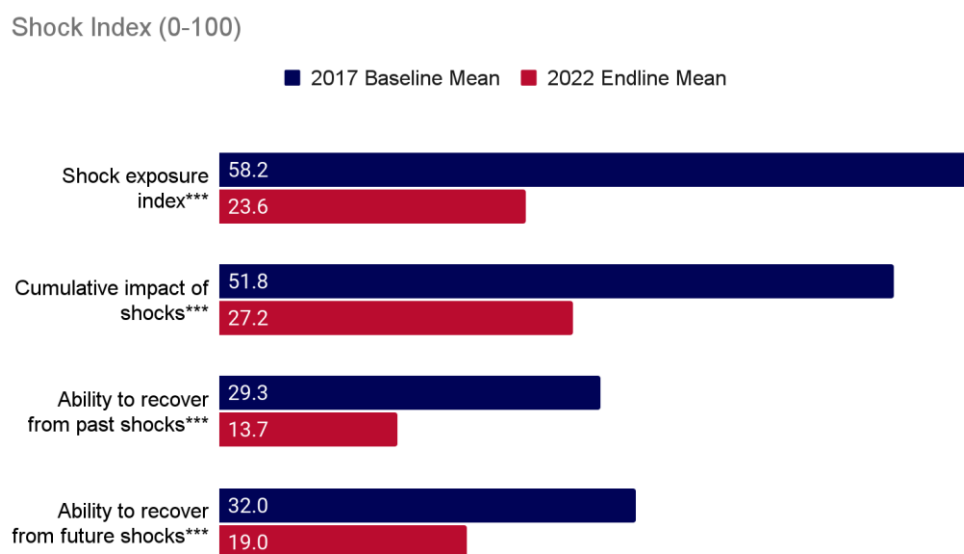
#### MIXED METHODS ANALYSIS USING PRE-POST ANALYSIS OF HOUSEHOLD SURVEYS AND QUALITATIVE DATA

The **pre-post analysis** compared measures of resilience for a sample of households in SHOUHARDO III communities who participated in a household survey at baseline to a similar village of households from the same communities who participated in the endline survey in 2021. The difference between these measures can be understood as changes in resilience in these communities that may have been caused by SHOUHARDO III interventions, by broader changes in Bangladesh during that period, or by a combination of the two; a pre-post design does not allow the research team to identify what caused any of the measured changes. Similarly, the perspectives of participants in the **qualitative study** in “best case scenario” communities where SHOUHARDO III implementation was particularly strong provides descriptions of the changes they have experienced since the project began and perspectives on how and why changes occurred. While participants might attribute changes to SHOUHARDO III, this does not provide definitive causal evidence of its effects. Rather, it highlights possible pathways of change and insights on project implementation, acceptance, and engagement.

**Respondents in the endline survey, conducted after 5 years of the SHOUHARDO III program, perceived both reduced exposure to shocks compared to baseline participants and reduced negative effects of the shocks they did experience.** However, **households surveyed at endline** perceived that their ability to recover from shocks they recently experienced and shocks they might experience in the future was lower than households surveyed at baseline (Figure 3.42). These results are somewhat contradictory, and unfortunately difficult to resolve with existing data. Qualitative evidence helps to partially address this puzzle. In best case scenario villages, although participants described many ways in which they believe SHOUHARDO III-implemented activities helped to buffer households and communities from shocks associated with both flooding and the COVID-19 pandemic, they also described the latter in ways that indicate that this was an unprecedented, widespread, and multifaceted shock. It might be that by the time of the survey, the pandemic had depleted household resources and strained safety nets, reducing their confidence in their abilities to recover from current and future adverse events. Only a small number of especially resilient households who participated in qualitative interviews seemed able to weather the pandemic with minimal impacts on their food and nutrition security.



Figure 3.42: Pre-post comparison of self-reported shock exposure and perceived ability to recover from shocks (RQ2.1)



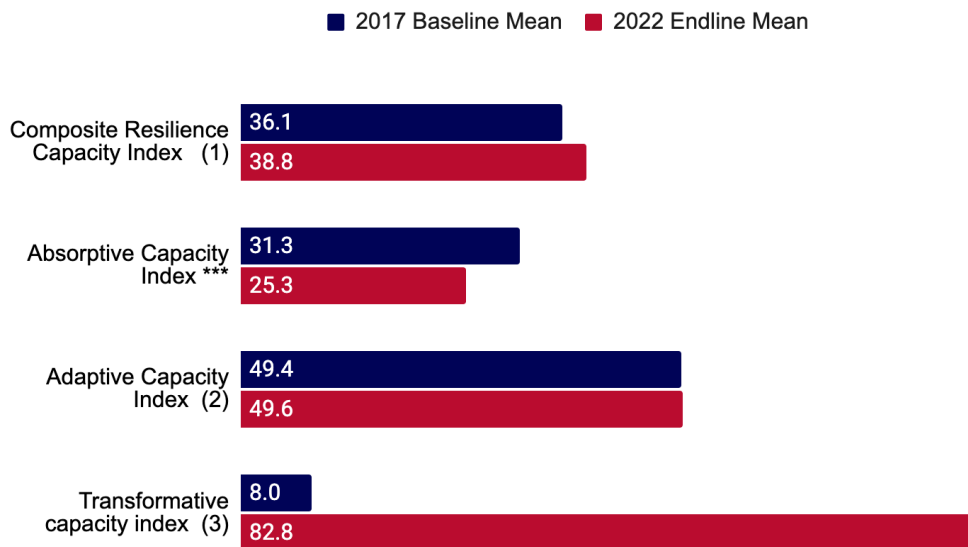
Sources: SHOUHARDO III Baseline survey (2017); SHOUHARDO III endline survey (2021)

\*\*\*p<.001

To further understand households' resilience or lack thereof using the baseline and endline data, the research team developed indices corresponding to each type of resilience, as well as an overall index that combines all three indices into a single measure of resilience. There were slight changes in the survey and composition of the indices between baseline and endline that do not permit direct comparisons between most of the indices, so these pre-post comparisons should be considered suggestive. Findings show limited changes in the resilience indices over time (Figure 3.43), but that the indices mask disparate, and often contradictory, patterns in the underlying measures. For example, some measures included in these indices increased between baseline and endline while others decreased over that same period. The qualitative study supports and helps to explain the pattern of findings from the pre-post analysis, identifies possible pathways through which the resilience capacities were built, points to pathways that were negatively affected by the pandemic, and where possible describes how capacities supported households' food and nutrition security during flooding and the pandemic.

Figure 3.43: Pre-post comparison of resilience capacity indices (RQ2.2)

Shock Index (0-100)



Sources: SHOUHARDO III Baseline survey (2017); SHOUHARDO III endline survey (2021)

\*\*\*p<0.001

<sup>1</sup> Baseline and endline scores are not directly comparable due to changes in the underlying indices.

<sup>2</sup> Baseline and endline scores are not directly comparable because the livelihood diversification index was not available at baseline.

<sup>3</sup> Due to using factor analysis to calculate the Transformative Capacity Index only having two sub-indices makes comparison between endline and baseline difficult.

**ABSORPTIVE CAPACITIES**

**Pre-post comparisons between the baseline and endline data indicate that absorptive capacities decreased in SHOUHARDO III communities, but evidence from the qualitative study indicates this may be largely because of the COVID-19 pandemic.** The quantitative absorptive capacity index combines measures of households’ access to informal safety nets, personal social networks, household savings, access to remittances, number of assets owned, bonding social capital and preparedness and mitigation of shocks. Between baseline and endline, absorptive capacity decreased slightly from 31 at baseline to 25 at endline, a statistically significant difference. Improvements in some indicators, such as improved disaster preparedness and increased access to savings, were offset by reductions in access to remittances and other indicators that are associated with absorptive capacity. Results from the impact evaluation validate this finding, as no differences between treatment and comparison communities can be detected for the absorptive capacity index (see below). Qualitative data from best-case scenario communities supports and helps to contextualize these findings.

**Shock preparedness and mitigation measures increased in SHOUHARDO III communities over time from 4 percent of households using a preparedness or mitigation measure at baseline to 6 percent using them at endline.** Community members in best-case scenario villages credit SHOUHARDO III interventions with improved outcomes following the most recent floods. Households widely reported accessing weather forecasts by dialing “1090” on their phones and that this allowed them to enact measures to mitigate the effects of flooding. A resilient household reported,

*“SHOUHARDO III alerts the people by informing about flooding early. No one faced that much loss, because everyone is aware now.” (RH\_M7)*

Upon hearing forecasts of floods, individual households report implementing specific disaster mitigation measures promoted by SHOUHARDO III, including storing food and other supplies, reinforcing houses and other structures, setting up portable stoves (*alga chula*) that are accessible during flooding, and shifting to designated shelters. They credit these practices with improving their outcomes and living conditions during and after floods.

Figure 3.44: Pictures of Flood Preparedness Measures in Best-case Scenario Villages (RQ2.3)

*Alga chula*



Dry fuel storage on elevated platform



Participants in the qualitative study indicated that SHOUHARDO III also provided cash and in-kind humanitarian aid during flooding and the pandemic. Many households reported that SHOUHARDO III gave supplies like masks, soap, towels and sanitizer, and the most vulnerable households reported receiving substantial cash transfers (typically one-time cash infusions of 12,000 *taka*, or approximately \$127.00) in direct support during the pandemic. Some community members also reported seeds and food support from SHOUHARDO III, but this type of aid was more commonly attributed to the government. Some households also reported receiving medicine and sanitation supplies from SHOUHARDO III during times of flooding.

SHOUHARDO III participants perceived that the project helped to strengthen post-flood cohesion and collective action among community members, between communities and local government, and among NGO actors in ways that better supported disaster management and recovery efforts. According to a female community leader,

*“Now people come forward to help each other in their difficult times. Before SHOUHARDO’s activity people didn’t practice this much. For example, people repair roads voluntarily now if needed.”*  
(CL\_F2)

Household savings significantly increased in SHOUHARDO III communities between baseline and endline. The share of households with any savings nearly doubled from 18 percent at baseline to 44 percent at endline, which is statistically significant. Qualitative data points to VSLAs, IGAs and cash transfers as interventions that may have contributed to this change. Households in best-case scenario villages, described using their savings to meet their basic needs during floods and the pandemic. According to a female community member,

*“Previously, we had to take loans during floods, because we hadn’t any savings at that time. But now due to the SHOUHARDO III program, we started to create savings and we didn’t need to take loans from others.” (FFG6\_X)*

Nonetheless, many households reported that they exhausted their savings during the COVID-19 related lockdowns. Those without savings apart from the VSLA and households who had depleted their other savings took advantage of low interest loans through the VSLAs to maintain their food security during pandemic-related lockdowns. They used these loans, typically around 3,000 to 6,000 taka, to pay for food, medicine, and other basic needs. According to one female community member,

*“We have been running this association for the last three years. After getting the money, many bought goats, chickens or ducks...but then the COVID pandemic came...We get 5000tk to 6000tk from the VSLA. We used that to run our [household] during that time.” (FFG5\_FX)*

**However, the pre-post analysis of survey data indicates that other measures of absorptive resilience declined, including informal safety nets, bonding social capital, and access to remittances.** At endline, less than one percent of households report access to remittances. Even in the best-case scenario communities, households described widespread loss of income when emigrant workers were forced to return home from cities due to COVID-related lockdowns.

**Asset ownership also decreased between baseline and endline, likely due to the pandemic.** The pre-post evaluation showed that the average number of assets fell from 35 at baseline to 28 at endline. Qualitative evidence indicates that despite many of the gains and improvements participants attribute to SHOUHARDO III, households frequently had to sell assets and resort to other harmful coping mechanisms during the pandemic-related lockdowns. Many households reported going into debt and selling their animals, land, and other assets in order to meet basic needs. In addition, because so many households were selling assets at the same time, the prices they received from the sales were much less (sometimes half) of what they might have otherwise earned, increasing the overall losses. Many households reported eating less or eating less frequently either because they could not afford to purchase food or because they were unable to access adequate food during lockdown-related market closures. Finally, several respondents reported that rates of child marriage increased during the pandemic, usually in secret.

#### **ADAPTIVE CAPACITIES**

**The pre-post analysis of household survey data indicated that adaptive capacities stayed approximately the same in SHOUHARDO III communities between baseline and endline.** The adaptive capacity index combines indicators that are associated with households’ ability to anticipate and adapt to changing circumstances, including the education of the household head, adoption of improved agricultural practices, asset ownership, and access to financial services. The adaptive capacity index in SHOUHARDO III communities remained a score of 50 out of 100, although this finding is only suggestive because the indices changed between rounds. Like the absorptive capacity index, the underlying indicators showed diverging trends. With balance tests showing the similarity of treatment and comparison villages, results from the impact evaluation are consistent with this finding, as no differences between treatment and comparison communities can be detected at endline for the adaptive capacity index (see below).

**Among households engaged in agriculture, more respondents at endline than baseline reported using improved agriculture practices that can contribute to sustainable crop, livestock and storage practices.** Pre-post data show that 74 percent of households reported using a number of improved practices after SHOUHARDO III, compared to 64 percent at baseline. This finding is in line with the findings from the qualitative research in households in communities where SHOUHARDO III implementation was especially strong. Project participants who were interviewed for the qualitative evaluation frequently described how improved agriculture practices including vegetable cultivation in sacks or buckets and improved varieties of rice have made them

less vulnerable to recent floods. Growing vegetables at home, and especially the practice of growing vegetables in sacks or buckets has made a limited amount of land a source of food and income, and one that is resistant to floods because plants can be moved to higher ground as floods approach. According to a female community leader,

*“Previously, we have seen that only the wealthy/rich people cultivate crops, and the poor [people] worked as day laborers on the crop fields. But now both of them are involved in farming activities. Previously, many kept their land uncultivated, but now everyone is cultivating vegetables in the lands that they have. Many also in sacks.” (CL\_F2)*

Some households specifically mentioned “Bangladesh Rice Research Institute (BRRI) variety number 28,” a rice variety introduced by SHOUHARDO III, which can be harvested earlier, ahead of floods. They described how growing this variety helps to reduce losses in food and income that would otherwise get washed away into the surrounding waterways.

**However, households engaged in agricultural activities also reported reduced use of agricultural credit; this estimate declined from nearly 40 percent at baseline to just 22 percent at endline in the pre-post analysis.** That said, qualitative data from best case scenario communities suggest that households may have expanded use of financial services for purposes other than agriculture. SHOUHARDO III launched and revitalized VSLAs, some of which were organized by *Sanchay Sathis* (“savings companions,” or local VSLA service providers). VSLAs served as the primary source of financing among qualitative interview participants. Although a few described using VSLA savings as a source of financing for acquiring productive assets, including livestock, land, seeds, fertilizer, and other agricultural inputs, most community members who discussed VSLAs spoke of them as a safety net during difficult times. During the pandemic, especially resilient households were able to use VSLA savings and loans (and sometimes the COVID-related cash transfers provided by SHOUHARDO III) to invest in both physical assets and human capital, such as supplemental lessons for their out-of-school children, rather than merely subsisting on savings.

**Finally, although it is not possible to assess changes in livelihood diversification because of survey changes between baseline and endline, qualitative data suggests that this diversification may have occurred and supported increased food and income security during the pandemic and flooding.** Some community members in best-case scenario villages described how the youth job training promoted by SHOUHARDO III increased the rate of employment in the community and how their wages have helped households survive during hard times. Moreover, many households that were considered especially resilient within best-case scenario villages described how their uptake of rice and vegetable cultivation and raising livestock increased their income and savings enough to sustain them during flooding and throughout the pandemic without needing cash or food assistance or loans. Home production of vegetables and fish proved especially beneficial during the pandemic because unlike livestock cultivation or wage employment, they were not vulnerable to lockdowns, market closures, or market shocks because households were able to consume the nutritious food they did not or could not sell. According to one resilient household member,

*“I can consume the vegetables that I cultivate in my house. Then, I go fishing and I have rice, which I cultivated also. I have all the arrangements in my house.” (RH\_M1)*

#### **TRANSFORMATIVE CAPACITIES**

**The pre-post analysis of household survey data indicates that SHOUHARDO III communities had increased access to agricultural services after the program, which may contribute to overall increased transformative capacities and resilience to future shocks.** The transformative capacity index measures access to formal safety nets and agricultural services. Although access to formal safety nets decreased very slightly from 6 to 5 percent, access to agricultural services dramatically increased from 12 to 41 percent. Results from the impact evaluation are consistent with this finding, as transformative index scores in treatment communities

exceed those in comparison communities (see below). Qualitative evidence from best case scenario villages provided limited evidence of access to formal safety nets; however, participants provided significant evidence of access to agricultural and other services and described how this has already begun to translate into improved outcomes during shocks.

**The qualitative study found early evidence that the increased availability of livestock services, specifically vaccinations, has reduced the risk of animal epidemics.** However, the transformation of the system is still vulnerable because the sustainability of market-based approaches promoted by SHOUHARDO III depend on community willingness to pay for vaccinations (see the discussion of findings for research question 4 for more information on households' willingness to pay for these services).

**SHOUHARDO III's promotion of digital access to agricultural and health services, including app-based support for agricultural diseases and telemedicine, were especially effective adaptations during the pandemic in best-case scenario villages.** This digital access could offer longer-term benefits in terms of increased access to services in the most difficult-to-reach communities. Participants and implementers describe how these services worked in practice:

*"We used the telemedicine service at that time and explained the symptoms, then they prescribed the medicine." (FFGI\_F2)*

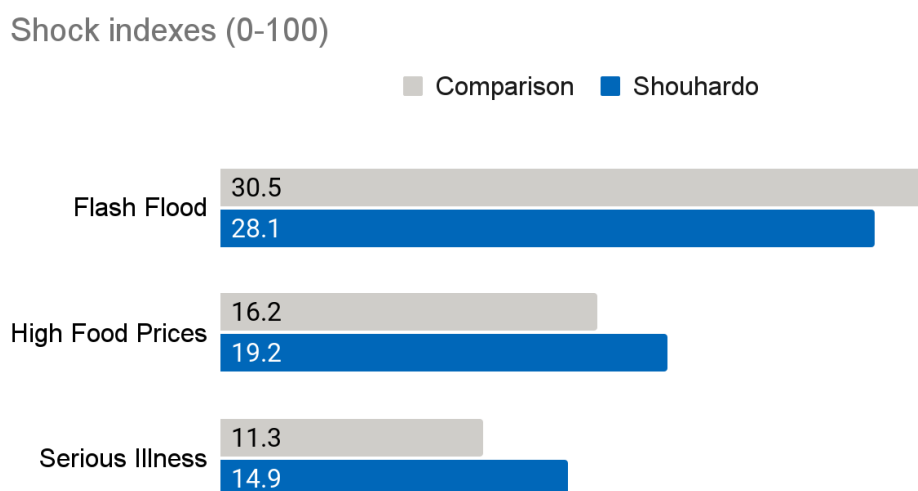
*"For physical problems, they are getting services from the clinic; they are getting the solution for an agriculture related problem by contacting through phone and using apps to get a solution. Now they have access to these services, and they are practicing these also. Now, they can recover from the shocks because of networking... They send the prescription and suggestions on IMO [a messaging app]." (IM\_M1)*

*"We [SHOUHARDO implementers] provided a smart phone to the leader of the groups of poor and extreme poor, and taught them how to download apps like Krishoker Janala, and Fosholi from the Google Play store. From these apps, they can learn how to control the insects or which pesticides they need to use." (IM\_F1)*

## IMPACT EVALUATION ANALYSIS

The third evaluation method used was impact evaluation. In this section, the quantitative impact evaluation of resilience capacities between treatment and comparison villages assesses the program's impacts on households' resilience capacities and food security. The impact analysis can help to clarify our understanding of the cause of any measured differences over time by comparing the resilience capacities in the treatment villages to the similar comparison villages. Because these comparison communities were similarly affected by the same significant shocks as SHOUHARDO III villages, some of the decreases in resilience found by the pre-post survey may be "canceled out" by trends that occurred outside SHOUHARDO III villages.

Figure 3.45: Top three shocks in SHOUHARDO III villages and the comparison villages (RQ2.4)



The evaluation finds no statistically significant differences between the SHOUHARDO III and comparison communities on composite, absorptive or adaptive resilience capacity indices. **However, there are large and statistically significant differences in the Transformative Resilience Index, driven by significantly higher rates of respondents who report having access to agricultural extension services in the treatment villages. This is similar to the findings in the pre-post and qualitative evaluations where there are few changes in the absorptive and adaptive resilience capacity indices and larger changes to the transformative resilience index** (see the above discussion for qualitative and pre-post evidence that supports this finding).

The evaluation team took the analysis a step further and compared differences between household food security outcomes in SHOUHARDO III and comparison communities that experienced major shocks (in which more than 25% of households reported experiencing the shock) to the differences between SHOUHARD III and comparison villages that did not experience major shocks.

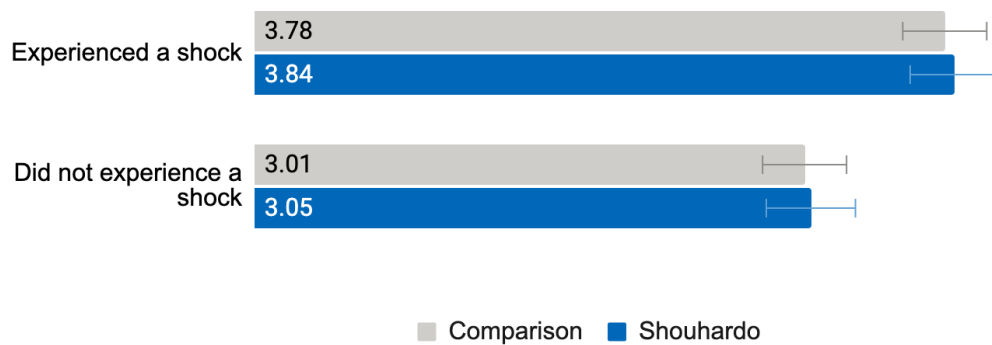
**The impact evaluation provides suggestive evidence that households in SHOUHARDO III villages that experienced major shocks were better able to maintain their food consumption than comparison villages that also experienced major shocks.** Although not statistically significant, the difference between SHOUHARDO III and comparison communities was roughly twice as large in shock-affected communities. The additional benefit of SHOUHARDO III participation in villages experiencing shocks suggests that the program may have meaningfully built resilience along at least this specific dimension. This is consistent with the pre-post findings of participants' perception that they endured less negative effects of shocks after receiving SHOUHARDO III assistance in comparison to before the program occurred. However, when drawing these same types of comparisons for child stunting outcomes, there are no differences between groups regardless of the extent of shocks faced by the community (studies indicate that child stunting is a slow changing indicator and may take longer to manifest after shocks (USAID, 2021). See RQ1 Purpose 2 for findings related to child stunting indicators in the full sample).

We further find that **SHOUHARDO III program's improvement of households' Food Consumption Score (FCS) may have been greater in villages that experienced major shocks (although there were some improvements even in villages that did not have major shocks; see Figure 3.46).** Again, these improvements are relative to comparison villages that are otherwise similar in terms of shocks and other conditions. The additional benefit of

SHOUHARDO III participation in villages experiencing shocks suggests that **the program may have meaningfully built resilience along at least this specific dimension**. In particular, the increased access to agricultural extension services and adoption of sustainable agricultural and storage practices (both important pieces of the resilience indicators) due to SHOUHARDO III may help strengthen resilience capacities against future shocks. Again, these findings help to validate the results of the pre-post analysis, which reflected increased access to agricultural services between baseline and endline.

Figure 3.46: Impacts on food consumption may vary based on villages' Exposure to Major Shocks (RQ2.6)<sup>35</sup>

### Household Food Consumption Score in Villages that...



Taken together, these results suggest that **households in SHOUHARDO III villages that experienced major shocks may have been better able to maintain their food consumption than comparison villages that also experienced major shocks**. However, these protective benefits do not appear to have carried over to child stunting outcomes. Overall, the findings of the impact evaluation are broadly consistent with the pre-post and qualitative evaluations.

<sup>35</sup> This figure reflects adjusted means which are adjusted for all of the covariates in the regressions for each outcome.



**RESEARCH QUESTION 3 FINDINGS: IN EACH TECHNICAL SECTOR, WHAT ARE THE STRENGTHS OF AND CHALLENGES TO THE EFFICIENCY AND EFFECTIVENESS OF THE INTERVENTIONS' IMPLEMENTATION AND THEIR ACCEPTANCE TO THE TARGET COMMUNITIES?**

**3.3.1 SUMMARY OF RESEARCH QUESTION 3 FINDINGS AND KEY TAKEAWAYS**

SHOUHARDO III aimed to promote equitable food and nutrition security through a deeply multisectoral approach that explicitly targeted the poorest and most vulnerable households in *char* and *haor* communities. This section integrates qualitative data and survey data to assess the extent to which SHOUHARDO III implemented this approach as planned. The survey measured program participation in various sectors, including programming that may have been provided by CARE and its partners or by other unrelated organizations working in the same areas. Although the pre-post analysis did not generate estimates of program participation at baseline that could be compared to present-day activities, the impact evaluation provides important evidence on the breadth of participation in various types of programming compared to other, similar communities. Additional analysis by different subgroups assesses the extent to which the program reached the most vulnerable community members. Evidence from the qualitative evaluation in best case scenario villages where program implementation was especially strong provide complementary evidence of the strength and inclusiveness of implementation, and indicate *how* these results may have been achieved.

**KEY FINDINGS:**

- Approximately 40% of surveyed households in the SHOUHARDO III intervention villages reported participating in at least one SHOUHARDO III program activity.<sup>36</sup> This rate was higher among poor households and female-headed households.
- The impact evaluation found that SHOUHARDO III raised participation in many sectors, including health, agriculture, nutrition, business, and disaster-focused programs relative to comparison communities.
- SHOUHARDO III had significant impacts on participation among poor households in business, health, and nutrition programming. Female-headed households saw particularly large improvements in participation particularly in business programs.
- SHOUHARDO III effectively targeted services to the most food-insecure, Poor and Extremely Poor members of best-case scenario communities, and its multi-generational and gender-inclusive approach to its interventions facilitated community acceptance.
- SHOUHARDO III's collaboration, coordination and integration of activities with local government and with other program implementers facilitated effective intervention implementation and acceptance.
- Some participants struggled to balance their participation in SHOUHARDO III activities with their home and other community obligations.

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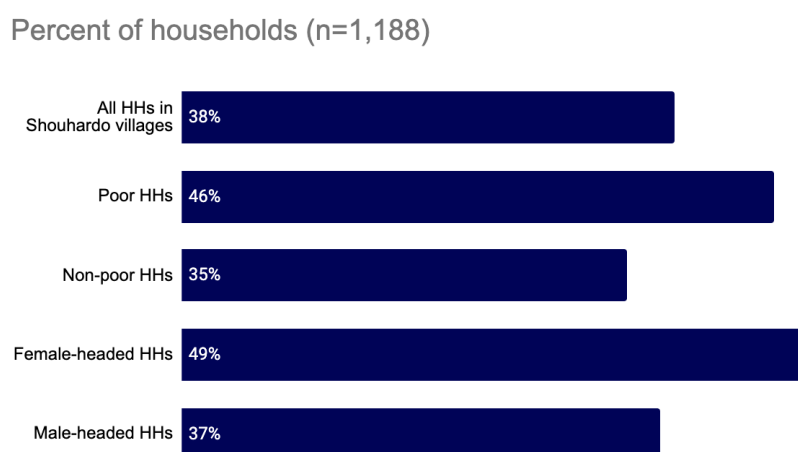
<sup>36</sup> Sampling was population-based, meaning that the sample in both treatment and comparison villages should be considered representative of the entire village.

### 3.3.2 DETAILED FINDINGS OF RESEARCH QUESTION 3

#### IMPLEMENTATION STRENGTHS

Approximately 40 percent of households in the SHOUHARDO III treatment villages reported participating in at least one SHOUHARDO III program activity (Figure 3.46). This rate was higher among poor households (47%) than non-poor households<sup>37</sup> (36%), as well as higher among female-headed households (47%) than male-headed households (39%), indicating wide access and engagement in the program (Figure 3.47).

Figure 3.47: Participation in SHOUHARDO III programming in target villages, overall and by poverty status and head of household gender (RQ3.1)



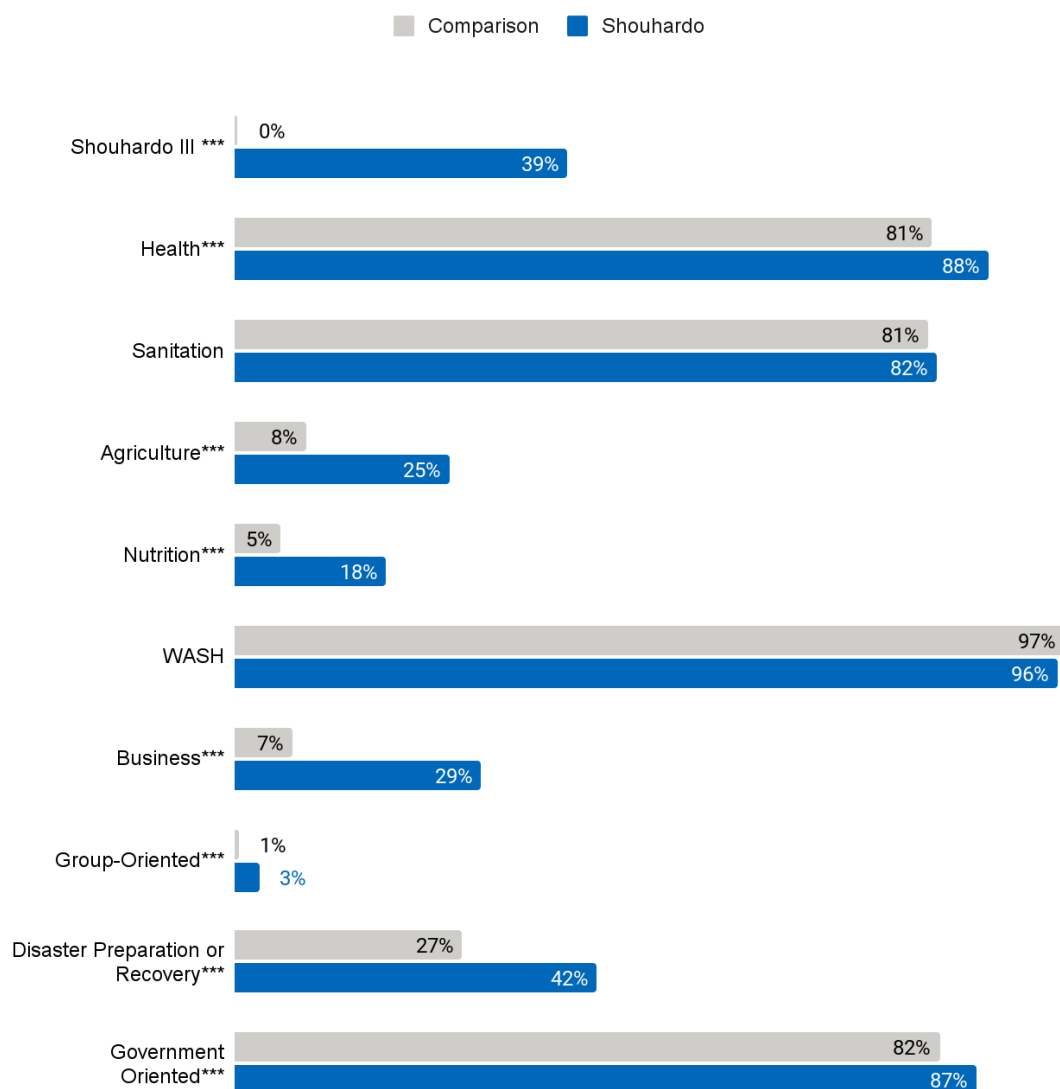
Sources: SHOUHARDO III evaluation endline survey (2021-2022)

SHOUHARDO had significant impacts on participation in programming focused on health, agriculture, nutrition, business, group-oriented activities, and disaster preparation. As seen in Figure 3.47, the difference between households in the SHOUHARDO III villages and comparison villages is statistically significant across health, agriculture, nutrition, business, disaster preparation or recovery, and other group oriented programs. (Figure 3.48).

<sup>37</sup> For this calculation, poor households were defined in the quantitative data as households that are living on less than \$1.25 a day (based on the prevalence of poverty indicator).

Figure 3.48: Overall participation in programming by sector in SHOUHARDO III and comparison communities (RQ3.2)

### Percent of households participating



Sources: SHOUHARDO III evaluation endline survey (2021-2022)

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001

Moreover, comparing participation impacts among poor and non-poor households, one can see particularly large increases in participation among poor households in business, health, and nutrition programming. Female-headed households saw particularly large improvements in participation in business programs (Figure 3.47).

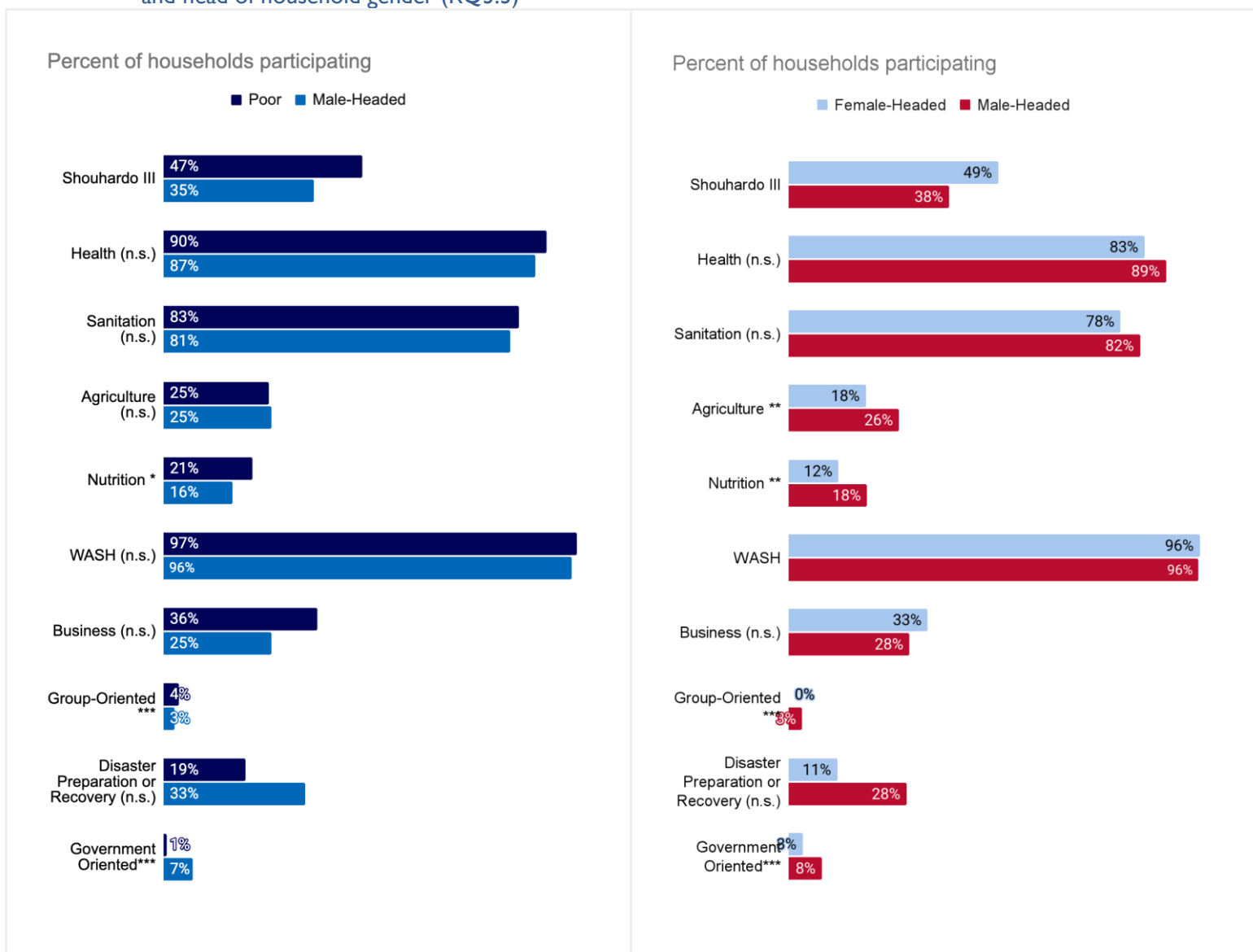
**Qualitative evidence corroborates this pattern. Participants in best case scenario communities frequently described how, across the different technical sectors, SHOUHARDO III systematically targeted communities' poor and extremely poor (PEP) to receive services.** In the best-case scenario villages, implementers and community members described how SHOUHARDO III conducted a survey in each village to identify poor and

extremely poor community members and used those results to select participants. A female participant describes the process they used as follows.

*“At first, a person came to our community...He asked for our assistance to conduct a survey... After the survey, they categorized the whole community in 5-6 categories such as rich, middle class, lower middle class, poor, extreme poor...[He selected] poor and extremely poor households and numbered them, like my household number is 909. After this, he arranged many meetings like a COG (Core Occupational Group) meeting, a FFBS (Farmers Field and Business School) meeting. That’s how we all became involved in this.” (FFG3\_X)*

Input and service providers in turn used this information to target their services to the most vulnerable households and, following encouragement from program implementers, some even adjusted their prices for SHOUHARDO III participants to guarantee affordability.

Figure 3.49: SHOUHARDO III impacts on participation in programming by sector, poverty status and head of household gender (RQ3.3)



Sources: SHOUHARDO III evaluation endline survey (2021-2022)  
 \*p<0.05 \*\*p<0.01 \*\*\*p<0.001; n.s.: not significant

Note: The significance level in Panel A indicates whether the impacts for poor households were themselves significantly different from impacts for non-poor households, The significance level for panel B indicates whether the impacts for female-headed households were significantly different from impacts on male-headed households. The differences may be in either direction

**The qualitative analysis of best case scenario communities identified several other implementation strengths. Some local implementers expressed that supporting community ownership of SHOUHARDO III activities, particularly through VDCs and other committees, strengthened community acceptance and sustainability.** Because SHOUHARDO III linked community groups with local governments, local implementers believe that communities now have the ownership and capacity to continue activities promoted by SHOUHARDO III. For example, an implementer described the success of the close collaboration with the VDCs.

*“We did regular sessions of hand washing to raise their awareness, and this activity is still in observation. Until now, we are able to cover 100 percent sanitation of the program areas with the help of the union parishad and the VDC.” (IM\_F2)*

**SHOUHARDO III’s explicitly gender-inclusive and multi-generational approach improved community acceptance of the different interventions, especially those focused on health, nutrition, and gender empowerment.** Activities in these sectors explicitly targeted men and male youth, as well as fathers-in-law and mothers-in-law, because a lack of acceptance on the part of men or older generations constituted a barrier to community acceptance of the gender norms and practices promoted by SHOUHARDO III. Implementers reported meeting with mothers- and daughters-in-law together to overcome household-level barriers to women’s empowerment. One implementer described some of their work this way.

*“When we gave them the food supplement, we faced a problem. We demonstrated to them how to eat the supplement but they didn’t follow that...[To overcome it] we...visited the households—by doing these things we tried to understand them...During that time, we also worked with the groups of fathers and mothers-in-law...we engaged the male and adolescent boys in women’s empowerment.” (IM\_F1)*

## IMPLEMENTATION WEAKNESSES

### IMPACT EVALUATION FINDINGS

**As shown in Figure 3.49, SHOUHARDO III did not have significant impacts on participation in programming focused on WASH, sanitation, or government oriented activities.** Households in the SHOUHARDO III treatment areas were no more likely to participate in WASH, sanitation, or government-oriented programming than households in comparison areas. This could be because large proportions of households in comparison areas also reported participating in programming carried out by other organizations, including 97% participation in WASH programs. While participation in most sectors other than business tended to be higher in male-headed households than in female-headed households (Figure 3.49) this report is unable to identify within household participation meaning there is no data from this survey on female and male participation within female and male-headed households. Qualitative study

**The qualitative study also found that, notwithstanding the systematic approach to identifying poor and extremely poor (PEP) community members, the allocation of services was not always transparent to community members.** During focus groups there was some resentment reported among those who did not receive direct support. As one participant noted,

*“Those who didn’t get the support...criticized our activities.” (FFG12\_X)*

Secondly, trainings and activities were sometimes difficult for community members to participate in around their obligations to their families and communities. According to a community leader,

*“Most of the people didn’t want to attend the training because the venue is far away. Then the duration is long, how they will stay there...Some went for the training, some didn’t. Those who understood about it received the training. But later others who refused to attend asked about the start date of another batch of training sessions.” (CL\_M11)*

#### **RESEARCH QUESTION 4 FINDINGS: TO WHAT EXTENT HAVE THE PROJECTS STRENGTHENED LOCAL LEVEL SYSTEMS AND CAPACITIES OF SERVICE AND INPUT PROVIDERS TO SUPPORT THE MARKET-BASED INPUT AND SERVICE PROVISIONING TO PREPARE FOR THE EXTENSION PHASE, AND BEYOND THE LIFE OF THE PROJECT?**

##### **3.4.1 SUMMARY OF RESEARCH QUESTION 4 FINDINGS AND KEY TAKEAWAYS**

SHOUHARDO III aimed to strengthen local level input and service providers and systems to support input and service provisioning beyond the life of the project. To accomplish this, they engaged the local private sector, including local and multinational companies, to provide critical goods and services such as agricultural inputs and vaccinations to SHOUHARDO III community members. In order for these systems to have long-term effects, they must be sustainable and adaptable to changing circumstances. Because of the difficulty in capturing the nuances of a complex market system within a household survey, this section relies on in-depth qualitative data from communities where implementation was especially strong, and integrates the perspectives of both community members and service providers to SHOUHARDO III communities.

##### **KEY FINDINGS:**

The sustainability of the local market-based approach to input and service provisioning will depend on both sustained community demand and willingness to pay for the inputs and services, as well as the capacities, resources, linkages and motivation of the service providers in sectors targeted by SHOUHARDO III. The research team found that

- After sensitization by SHOUHARDO III and LSPs, households in communities where implementation was strongest were generally willing to pay for a variety of inputs and services from LSPs.
- LSPs in most sectors described having strong motivation to continue offering their services and capacities to combine information and service provision in ways that support continued demand.
- Livestock vaccinators in particular face unique challenges in terms of households’ willingness to pay, the knowledge and capacity to continue to perform their work, access to transportation, and profitability, which pose long-term risks to the sustainability of their service provisioning.

##### **3.4.2 DETAILED FINDINGS OF RESEARCH QUESTION 4**

This section summarizes qualitative data on five key dimensions of the market systems:

- I. The willingness and ability of households to pay for local services and inputs

2. The levels and sources of motivation of input and service providers to serve their communities and their customers
3. LSPs' capacity, including the knowledge and skills needed to perform their work
4. The resources LSPs have to continue to perform their work, including both financial resources and access to transportation needed to reach remote communities
5. The linkages to other parts of the market system, including both supply- and demand-side linkages

#### WILLINGNESS AND ABILITY TO PAY

##### **Households in communities where implementation was strongest were generally willing to pay for a variety of inputs and services from LSPs supported by SHOUHARDO III.**

Community members in SHOUHARDO III villages and LSPs alike reported that participants and non-participants paid for water quality testing, health services provided by trained skilled birth attendants, sanitary latrine construction, animal vaccinations, seeds, and other agricultural inputs. Across the different sectors, service providers and their customers both described the LSPs' products and services to be of high quality, be of low cost, and provide benefits in terms of health (water testing, latrine construction), income generation (agricultural inputs, animal vaccinations), and convenience (agricultural inputs, latrine construction). Two other factors that facilitated households' ability to pay are that some service providers reported providing discounted rates to community members in SHOUHARDO III villages, and some service providers were willing to work based on credit and allow their customers to pay over time. As one seed seller said,

*"To run the business, we have to sell [on credit]." (SP\_M5)*

However, creating demand for their inputs and services took some time and sensitization regarding the value of their goods and services, especially since some community members were reluctant to pay for services like growth monitoring, water testing, toilet construction, and vaccinations that SHOUHARDO III and other NGOs previously provided for free. In the words of a water quality tester,

*"Many don't want to pay for it saying that SHOUHARDO did it without taking any money. Then, I have to motivate them: Why do they need to test the water, what are the effects of drinking arsenic contaminated water? Then, they understand and don't create any problems." (SP\_F2)*

The longer-term sustainability of these services will depend on whether communities continue to both experience the benefits of and value these services.

**Livestock vaccinators in particular reported low profitability and challenges with their customers' willingness and ability to pay.** Unlike other inputs and services that LSPs provide in best-case scenario villages, the costs of vaccines are fixed by official government suppliers, which does not allow individual LSPs to negotiate discounted inputs. Instead, they are more vulnerable to losses; many vaccinators reported difficulties making a profit because of transportation costs or spoiled vaccines. In addition, households have proven to have limited willingness and/or ability to pay for vaccinations in a timely manner, which might negatively affect the sustainability of this LSP system in the longer term. One vaccinator describes his experience as follows.

*"Many didn't pay the fees properly. Suppose someone took five goats for vaccination, but they gave fees for only four goats. Some have the ability, and some don't. Many gave three goats' fees instead of five. Many people said that they will pay later... But many people don't want to give any money for the vaccines. And sometimes I have to destroy some vaccines if they expire or have defects." (SP\_M1)*

## LSPs' MOTIVATION, CAPACITIES, RESOURCES AND LINKAGES

There are a number of factors that are necessary for LSPs to be able to sustainably support market-based input and service provisioning into the future. From the LSPs' point of view, it is essential that they have the motivation to continue this work, the resources, the capacities and the required linkages. In this section we will look at each of these factors in turn in considering the sustainability of this system for the extension phase and beyond the life of the project.

### MOTIVATION

**Local service and input providers across different technical sectors all described high levels of intrinsic and extrinsic motivation to continue providing their inputs and services after the end of the project.** Service providers in all the different sectors described their intrinsic sense of satisfaction from being able to help the members of their community, especially the poorest households, and in contributing to overall community development. For example, according to one vaccinator,

*"[My services] are good for me as well as for the community. Because the people are getting the service. As a result the chickens, ducks, cows and goats don't fall to disease much."* (SP\_M19)

The main extrinsic motivator mentioned was increased income. Most service providers did not express concerns over the long-term financial viability of their businesses. Many reported that SHOUHARDO III's contributions to community awareness and increasing household income and savings had improved the viability of their businesses and thus the financial prospects of their household. One long-time seed seller described how his income had more than doubled since SHOUHARDO III became active in the community, and a wholesaler of vegetables described how his business had enabled him to pay for the marriages of his several daughters.

### CAPACITY

**The main capacity LSPs need to continue to support the local market-based systems is the knowledge and experience to provide information and training related to the services and inputs they offer,** according to LSPs across the technical sectors as well as the community members they serve. Providers of agricultural inputs routinely educate communities on when and how to cultivate the seeds they purchase, including when and how to plant them and how to apply fertilizer. Two seed vendors described their approaches.

*"I advised them about cultivating vegetables like which vegetables need to be cultivated in which season. Then suggest to them about the germination process of different seeds. I answered the members [of SHOUHARDO III] about their queries about farming and agriculture as far as I can."* (SP\_M2)

*"Suppose I sold some seeds to a woman. After 15 days, I make a field visit to see the condition to know which seed is good. It depends on the practice. If I see any problem, I suggest to them what to use on the seeds. Along with it, I suggest to them what pesticide to use during which time in the crop fields."* (SP\_M10)

Similarly, vaccinators raise awareness of vaccines, recommend basic treatments for common animal diseases, provide information and training on aspects of animal health and care, and help to deliver baby animals. Water quality testers provide information about arsenic contamination and its implications for health. The exchange of information, as well as services and inputs, helps to build and sustain relationships between community members and service providers, supports continued and increased demand for their products and services, and thus helps them to continue the activities promoted by SHOUHARDO III. Some vaccinators also mentioned the need for knowledge and



experience to continue to provide useful services. They noted that without additional training and capacity building in vaccination and in providing other animal health services, their capacity to support communities would remain limited. According to one vaccinator,

*“If the training duration was long, we could learn something more and we may face less problems in the future.” (SP\_M1)*

**Many service providers described expanding their capacities and diversifying the sectors they work in.** The interest in and desire to expand the services and inputs different LSPs would provide was striking. Respondents described how they received training and are either currently providing or aim to provide multiple kinds of services and inputs supported by SHOUHARDO III, rather than specializing in a single sector. In the words of an agricultural input provider,

*“I attended all the training sessions of [SHOUHARDO III] because I liked their activities.” (SP\_M10)*

Some of the combinations of services that have resulted are complementary and may serve to increase overall access to bundles of related services. For example, some water quality testers also work in sanitary latrine construction, a seed vendor also works as a vegetable wholesaler, and one *Sanchay Sathi* (“savings companion,” or local VSLA agent) reported selling sanitation and nutrition products to women and adolescents in her savings groups. However, some of the combinations seem less closely related to one another and might lessen the overall availability of services, depending on the relative time commitment and income potential. For example, one vaccinator reported they planned to start selling seeds, in part due to low profitability of vaccinations.

## RESOURCES

**SHOUHARDO III programming included providing temporary honoraria to skilled birth attendants, but it is not clear how sustainable their services would be once this support is withdrawn.** Skilled birth attendants described receiving an honorarium from SHOUHARDO III for transportation, and that this helped them to provide services such as growth monitoring to poorer community members who were reluctant or found it more difficult to pay. However, it was not clear to the skilled birth attendant whether they would be able to provide the same level of services to poor households without additional supports from the program or other sources. In contrast, *Sanchay Sathis* receive honoraria from the VSLA participants as part of their services, which does not require direct support from SHOUHARDO III. One *Sanchay Sathi* described how she received 1,500 *taka* from her work and implied that the honorarium helps her to incentivize and justify spending time on coordinating VSLAs when the time commitment came into conflict with her responsibilities to her home and family.

**A key resource for LSPs, which will be critical to sustaining the market-based system, is access to appropriate transportation to reach households and communities, many of which are remote or difficult to access.** In addition, different types of LSPs have different transportation challenges and needs. PCSBAs noted specific challenges in reaching households for child births that happen during the night due to transportation access, safety concerns, and gender norms around women traveling alone. Sectors that require more and larger equipment face other, transportation-related constraints. Vaccinators commonly described a need for motorcycles to carry their equipment between the several communities they were responsible for.

*“Previously, I used a bicycle. A few days ago, I bought a secondhand motorcycle... Obviously, it benefitted me a lot. Previously, I used a bicycle. I was able to give services to 60% to 70% of people. But after buying the motorcycle, I can give service to around 80% to 90% of the people.” (SP\_M1)*

The same vaccinator cited the roads as a constraint.

*“This is a vulnerable area. It’s a char area. It’s not easy to get different government services. ... The roads aren’t good for commuting. You know better what can happen if the roads are not good for commuting.” (SP\_MI)*

In communities surrounded by water, reliable access to boat services for LSPs and the communities they serve is an especially critical lifeline ensuring reliable access to inputs and services, especially when flooding makes roads impassable. Whether LSPs are able to secure transportation will play a part in determining the sustainability of market-based input and service provisioning beyond the life of the project.

## **LINKAGES**

**LSPs do not see themselves as a part of a market system, which SHOUHARDO III aimed to create.** Implementers described the development of local input and service provisioning systems for agriculture and health care provision where communities were linked with service providers, government entities, and customers. However, LSPs did not seem to share the perception that they were participating in a market system, or that there was a system available to support them after the life of the project. Instead, they tended to describe their work in terms of individual relationships with suppliers, government-based service providers, implementers, and their customers, including those who they connected with through SHOUHARDO III-promoted community groups.

**LSPs across different sectors described a wide variety of linkages that they use to grow and sustain their businesses, but the linkages and local systems directly supported by SHOUHARDO III mattered most for vaccinators relative to other service providers.**

The main types of linkages LSPs relied on included (1) “supply-side” linkages that provided them with physical inputs as well as information and training; (2) “demand-side” linkages that connected them with potential customers; and (3) linkages with ongoing training and technical support. LSPs across different sectors, including agricultural input suppliers, vaccinators, *Sanchay Sathis*, water quality testers, and skilled birth attendants, attributed current demand-side linkages to community groups and training and technical support linkages to SHOUHARDO III, but did not suggest that they depend on support from SHOUHARDO III to maintain these linkages in the future or to form new linkages. However, most expressed a general hope that SHOUHARDO III activities would continue in the community so that participants would remain aware of their services and the benefits they provide.

Vaccinators most strongly attributed their supply, demand, and technical linkages to SHOUHARDO III’s interventions, possibly because SHOUHARDO III was central to launching their services, and because of the highly technical nature of their inputs. For both vaccination supplies and technical assistance, SHOUHARDO III introduced them to government livestock officers and livestock hospitals where they obtain vaccine inputs and advice on animal treatments. On the demand side the vaccinators worked with SHOUHARDO III-sponsored vaccination campaigns that raised awareness about their services. Because more of their linkages went through SHOUHARDO III, the sustainability of their services is more vulnerable to the withdrawal of direct project support than other LSPs’ services. To be sustainable, vaccinators will need to maintain independent relationships with suppliers and the confidence of the communities, as well as find ways to overcome the willingness to pay, training needs, and transportation-related challenges discussed previously.

## RESEARCH QUESTION 5 FINDINGS: HAVE THERE BEEN UNINTENDED CONSEQUENCES (EITHER POSITIVE OR NEGATIVE) FROM THE PROGRAMMING?

### 3.5.1 SUMMARY OF RESEARCH QUESTION 5 FINDINGS AND KEY TAKEAWAYS

Development activities sometimes have unintended consequences. Positive, but unanticipated consequences can occur when interventions spill over within and across communities, or when interventions change behavior in ways that were not anticipated by a theory of change. Negative unintended consequences can occur when activities unintentionally incentivize harmful behaviors (for example, increased use of fertilizer, while increasing agricultural productivity, may negatively affect waterways), or when they cause broader environmental changes (for example, when a program has large and widespread effects on income, which in turn increases inflation).

Since these outcomes are, by definition, unanticipated, the surveys that the evaluation team conducted and analyzed were not designed to capture these types of changes either through the pre-post or the impact analysis. Therefore this section relies on qualitative evidence collected in communities where implementation was especially concentrated and thus, where unintended consequences may have been more likely and more strongly linked to the intervention. We considered consequences to be “unintended” when they were supported by qualitative or quantitative data but not explicitly anticipated by the SHOUHARDO III theory of change or other program documents.

#### KEY TAKEAWAYS

- There were no widely reported negative consequences from SHOUHARDO III.
- There was some evidence of unintended positive outcomes, including increased educational support for PEP children, and spillover of VSLAs and agricultural practices within and across communities.

### 3.5.2 DETAILED FINDINGS OF RESEARCH QUESTION 5

#### NEGATIVE UNINTENDED CONSEQUENCES

There were no widely reported negative unintended consequences from the SHOUHARDO III interventions.

#### POSITIVE UNINTENDED CONSEQUENCES

**The most commonly reported unintended consequence from SHOUHARDO III programming was increased educational access for poor families in best-case scenario communities.** Many community members reported channeling their VSLA savings and earnings from income-generating activities into their children’s education (including school fees, supplemental tutoring, and school supplies). According to female SHOUHARDO III participants,

*“[It was] due to the benefit that we got from [homestead agricultural production]. For extra income, to bear some expenses of the child, it’s not only about eating. We can buy some materials that are needed for our children’s education.” (FFG4\_X)*

*“We take [from the VSLA] to spend the money on our children’s education purpose — for registration, or paying tuition fees.” (FFG7\_X)*

Women most predominantly reported such findings and there is other suggestive evidence that increased women’s income and involvement in household decision-making may have played a role in

contributing to this change. Although education is an important pathway towards resilience, the theory of change for the interventions did not explicitly note it.

**Participants in best-case scenario communities also reported that some agriculture interventions as well as VSLAs were spilling over within communities to better-off households as well as into other, non-program communities.** Some participants reported that SHOUHARDO III-promoted agriculture interventions, such as homestead vegetable cultivation in pits, buckets and sacks and new crops, were adopted by non-participants within the community. Similarly, there were indications VSLAs had spread to non-participants, both within the same community and in nearby communities. According to a female community leader,

*“After seeing their success, my nephew formed a [VSLA] group, and I have already taken 100tk from 20 people to start the activity of a new group.... They have a box also and the interest rate [is] also [the] same. But they deposit 500tk per month.” (CL\_F2)*

#### **4. CONCLUSIONS AND RECOMMENDATIONS**

The SHOUHARDO III program focused on five main areas or purposes. Overall, the research team found that there was progress over time in each of SHOUHARDO III’s focus areas, and that each area – to varying extents – contributed toward SHOUHARDO III’s goal in the treatment villages. For example, children’s nutritional status has improved from baseline to endline. All of the children’s health indicators have changed for the better with fewer children being stunted, underweight, and wasted, more children being exclusively breastfed and consuming a minimally acceptable diet, and fewer children having diarrhea. However, impact evaluation results suggest that the research team is limited in being able to attribute most of these differences directly to the SHOUHARDO III program. In general, there is limited evidence that the conditions at endline in SHOUHARDO III program villages were different from those in comparison villages. Improvements in the majority of measured conditions in the SHOUHARDO III program areas appear to have resulted in conditions similar to conditions in non-program areas, suggesting broader forces account for them.

There are certainly areas where findings show SHOUHARDO III activities caused positive outcomes. For example, the impact evaluation shows that some improvements in broader household food security could be attributable to the SHOUHARDO III program (measured through household food consumption), as well as slight improvements in women’s dietary diversity and women and children’s minimum acceptable diets. In addition, some improvements in resilience can be attributed to the program. Households in SHOUHARDO III villages that experienced major shocks were better able to mitigate the effects of the shocks—maintaining their food consumption—than households in comparison villages that also experienced major shocks. Households in treatment villages were also better able to recover from shocks through access to agricultural extension services and adoption of sustainable agricultural and storage practices than households in comparison villages. These successes merit attention so that they can be built upon, expanded or supported during the ongoing SHOUHARDO III extension phase or by other development work in the future. In addition, the research team found that SHOUHARDO III had some effects on the intermediate and long-term outcomes that were hypothesized to affect their main focus areas, such as nutritional status among women and children. Understanding where along the logic model paths there has been success and failure can also inform where corrective action is needed and where success is already waiting to be tapped.

There are many indications that the SHOUHARDO III program was well implemented, equitable, and well-received by communities. The SHOUHARDO III program engaged more than 40% of the households surveyed within villages where the program took place, with even higher rates of engagement among both poor and female-headed households. Poverty levels in the treatment areas improved between baseline and endline across all poverty indicators. Despite a small sample size, the poverty indicators for adult female only households showed improvement that equals the

improvement seen in the larger population, which indicates that these vulnerable households were not left behind during the program in terms of poverty reduction. In looking at participation, the research team finds greater rates of engagement in treatment villages than comparison villages on an array of topics, including business training, disaster preparedness, health, nutrition, and agriculture. SHOUHARDO III had significant impacts on participation among poor households in business, health, and nutrition programming. Female-headed households saw particularly large improvements in participation in business programs. The qualitative findings show that SHOUHARDO III effectively targeted services to the most food-insecure, Poor and Extremely Poor members of communities in the qualitative sample, and its multi-generational and gender-inclusive approach to its interventions facilitated community acceptance. SHOUHARDO III's collaboration, coordination, and integration of activities with local government and with other program implementers facilitated effective intervention implementation and acceptance, showing their implementation processes and focal areas are promising for future efforts.

The qualitative evaluation focused on villages where the interventions were well-implemented, and the community especially engaged, offering insights into the potential of the interventions. Can they work? If so, how and to what end? The research team found mechanisms of change in several areas that can be built upon and enhanced. For example, findings showed SHOUHARDO III was able to contribute to increased incomes through increased agricultural production, increased access to agricultural markets and crop prices, increased off-farm income, and increased access to financial services, although the number of men and women earning cash throughout villages in the treatment area appeared to have declined. Women's nutrition showed improvement between baseline and endline; women were less likely to be underweight at endline than baseline. The qualitative evidence from best-case scenario villages suggests improved nutrition-related knowledge, cash transfers, and homestead food production as potential facilitators of positive nutrition practices and diverse food consumption. Women in the treatment area also reported having much better access to health services at endline compared to women at baseline. Increased awareness around available and necessary health services for children such as growth monitoring programs (alongside improvements in access to and consumption of nutritious food) seemed to facilitate nutritional status improvements among children in best-case scenario villages.

It is beyond the scope of this evaluation to determine what factors or forces account for the matched conditions at endline in program and non-program areas, but it behooves the research team to highlight some of the lessons learned for future implementation of these and similar interventions. Understanding what changed in program areas, what didn't, and why can help inform decisions about future chapters of the SHOUHARDO III program and other development food security programs to ensure the most effective programs for vulnerable populations. Understanding the dynamics of change and responses of participants to interventions can also inform future work. Salient findings are also important to highlight for action. Here we draw several lessons and implications from the analysis that are particularly relevant to the next phase of the SHOUHARDO III project - the sustainability-focused extension, as well as to other projects undertaking similar work. However, the focus here is on how SHOUHARDO III can improve its sustainability efforts.

**Sustainability of local market systems.** SHOUHARDO III's efforts to build local market systems for input and service provision have generally been successful, possibly as a result of the initial piloting process. However, the ability of these systems to be sustainable in the longer term, especially after other SHOUHARDO III programming ends, varies by sector. SHOUHARDO III Plus is designed to focus on expanding the skills and products of LSPs so that they can respond to respective market needs. SHOUHARDO III Plus should pay special attention to addressing barriers to sustainability for vaccinators. Approaches could include facilitating access to training on emerging threats to animal health and providing linkages to motorcycle financing to help them carry their equipment from place to place and cover more communities before their doses expire. For the sustainability phase and for implementers of similar programs who hope to build sustainable market systems, both the strengths and weaknesses of the market systems that emerged through the

qualitative study demonstrate how critical it is to account fully for the unique market factors associated with each sector and the needs of the LSPs themselves in setting up and supporting new input and service provisioning systems.

**Youth training.** Program implementers may want to consider local economies when selecting industries in which to offer youth training programs. SHOUHARDO III trained youth in industries (such as electricity) in which little to no work was available locally, requiring them to emigrate from *char* and *haor* areas in order to find employment in their fields of training. While this internal migration can help to diversify sources of household income and generate remittances (both of which strengthen resilience capacities), increased migration may have unintended social and economic consequences for communities.

**Child nutrition.** While the research team observed improvements in young children receiving a minimally acceptable diet, the rates of children's diarrhea, exclusive breastfeeding, and child nutrition outcomes in treatment communities were otherwise not better than comparison communities, despite extensive program engagement among households in treatment areas. The SHOUHARDO III program team might wish to build on its area of success (young children receiving a minimally acceptable diet) and consider how to ensure that less successful activities effectively translate into improvements across child nutrition outcomes since, in this case, the successes in achieving dietary diversity did not appear to translate into reduced stunting rates. Even though stunting is tied to many factors, including but not limited to undernutrition (USAID 2021), future research could further explore this connection and speak to the merits of using stunting rates, which are costly and challenging to measure, as a key outcome for such programming.

**WASH.** The endline pre-post indicators show generally positive gains for households in treatment villages. Overall, households are slightly more resilient, have less hunger, are wealthier, use more sustainable agricultural practices, and women and children are in better health than at baseline, regardless of the reason why. More households in the treatment areas have access to improved water sources, use handwashing stations with soap and water, and use improved sanitation facilities than at baseline. However, fewer households have access to a water source (improved or unimproved) within a 30-minute round trip. Qualitative findings highlight that this may not be helped by persistent challenges around the affordability, accessibility, and year-round availability of improved water sources. Future interventions by other implementers should consider a broader focus on natural resource management practices to help address these challenges.

**Women's economic empowerment.** Despite gains in household decision making and women's autonomy between baseline and endline, other outcomes related to women's economic empowerment may require additional supports through LSPs or other sustainable delivery mechanisms. For example, additional support may be needed to help women access and use contraceptive methods. While female farmers have improved across several indicators, they still need greater access to credit and means and methods to earn cash. Women would also benefit from greater use of improved storage techniques and sustainable crop practices. Although further implementation has not been planned for, identifying ways to overcome women-specific barriers to economic empowerment and resilience is warranted in future programs in the area. For example, it might be cost efficient to develop strategies for women to adopt improved practices that require minimal effort and/or account for their existing time burdens.

**Resilience.** Despite significant improvements in transformative resilience capacities, including access to formal safety nets and agricultural services, SHOUHARDO III communities did not end up with absorptive or adaptive resilience capacities that were better than similar, non-SHOUHARDO III communities' capacities at endline. This suggests that program implementers of SHOUHARDO III, as well as other similar programs, should focus on ways to further support development of adaptive and absorptive capacities, including through informal safety nets, personal social networks, savings, formal financial services, education, and asset ownership for the most vulnerable households. They

should also carefully consider which types of services are best-suited to and most sustainable through direct provision of capacity building activities, provision by LSPs, or through increasing accessibility to public services.

**Evaluation.** This study utilized three evaluation strategies (pre/post, impact evaluation and qualitative methods) to provide a rich depiction of the effect of the SHOUHARDO III program on the communities where it was implemented. In particular, the research team used innovative data sources and methods to construct a counterfactual, when one was not identified at the start of the activity. Such a retrospective IE does not allow for typical balance tests on a large set of baseline variables, which can demonstrate if the treatment and comparison villages are statistically comparable. Future studies of similar food security interventions could build on our evaluation strategy by planning for an impact evaluation from the start. Implementers can work with evaluators to identify a comparison group at the start of an activity, through random assignment or quasi-experimental methods. We encourage USAID and implementing partners to take this step when designing future programming.

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